City of Kirkland
Urban Forest Management Plan
[DRAFT]

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Urban Forestry Management Plan

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Prepared for:

City of Kirkland

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Kirkland's urban forest encompasses the entire ecological system of vegetation, soil, water, air, birds, other animals and people. It includes the trees in yards, commercial and industrial areas; along streets, boulevards and trails, shorelines and stream corridors; and on privately-owned property. Urban forestry is about making space for, planting and managing trees in these spaces throughout our community for future generations to enjoy and benefit from.

Acknowledgments

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WASHINGTON STATE DEPARTMENT OF
Natural Resources

FOREST SERVICE
US
DEPARTMENT OF AGRICULTURE

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Executive Summary

Kirkland's urban forest is an invaluable resource that provides vital benefits to residents, visitors, wildlife, and surrounding communities. As a part of the city's green infrastructure, trees and forestlands contribute to the health of the local environment, including reducing runoff that contributes to contamination in Lake Washington, minimizing stormwater flooding, and improving air quality. While the community has long appreciated its trees and natural forestlands, it wasn't until the 1990's, that the importance of the urban forest resource was officially recognized. In response to the Growth Management Act, the City's Comprehensive Plan established a 40% canopy cover goal for the urban forest.

A Tree Management Review conducted in 2001, made recommendations aimed at improving both service levels and the urban forest. To date, most of the action items identified in the review have been completed and with recent annexation, the City has nearly doubled in overall area and tree canopy. Responding to this increased responsibility, the City contracted with Davey Resource Group to assess current the current urban forestry program and develop a long-term Urban Forest Master Plan to guide Kirkland over the next 20 years.

Program Review

To develop a thorough understanding of Kirkland's current urban forestry management program, DRG worked closely with City staff to outline the current policies, procedures, and knowledge that direct the care and management of public trees and forestlands. The program review focused on four primary areas:

The Urban Forest Asset – the individual and collective tree resource and the current level of knowledge about the structure, condition, and benefits of the asset

Guiding Policies and Regulatory Framework – the official documents, policies and codes that outline the vision, goals and strategies guiding the urban forestry program

The Municipal Urban Forestry Program – the organization of municipal staff and financial resources dedicated to the care, preservation, and management of the urban forest.

Community Involvement – a review of groups and individuals outside the general management structure of the City who are aware and engaged in urban forest sustainability, advocacy, volunteerism, and partnerships

The following provides a summary of the review findings:

The Urban Forest Asset – With a recent Urban Tree Canopy Assessment (2011), Kirkland has a comprehensive map of the location and extent of tree canopy within the overall community boundaries and by zoning category. In addition, the assessment revealed that tree canopy within pre-annexation areas had increase since 2002, from 32% to 36% overall. Including the annexation area, which encompasses a large percentage of parks, open space, and single-family residential lots, the City's overall canopy cover increased to nearly 41%. While this valuable information has not yet been integrated into the City's GIS database, once it is, Kirkland will have a valuable tool for identifying opportunities for reforestation and protection of key forest resources.

The City has a partial inventory of street trees. However, the information is incomplete and outdated. As a result, critical information about species, age, condition, and maintenance needs is limited. Without this information, it is impossible to determine the current structure, overall condition, value, and benefits of this asset. It is also difficult to develop an effective work plan to address maintenance needs and risk management considerations. And while some of this data has been integrated into the City's GIS management database, the integrity of the data has not been maintained or updated by staff.

Guiding Policies and Regulatory Framework – Since the adoption of the Comprehensive Plan in 1995, the City has adopted a number of policies aimed at the preservation and expansion of its urban forest resources, including Kirkland's Natural Resource Management Plan (2003) and the 20-Year Forest Restoration Plan (2008). Kirkland Zoning Code provides for tree protection and requires a permit and review process to remove trees for development. This code, while comprehensive and somewhat complex, provides adequate flexibility to accommodate various development scenarios. Perhaps one of its greatest program assets, Kirkland's solid regulatory framework has played a role in canopy preservation and expansion over the previous decade.

The Municipal Forestry Program – Currently, there are no single, formally recognized forestry programs with responsibility for urban forest management and policy. Responsibility is shared by a number of staff members within three departments: Planning and Community Development is responsible for development review, permits, and code enforcement; Parks is responsible for caring for trees in parks and open space; and Public Works is responsible for trees on streets, rights-of-way, and city facilities. In the past, good interdepartmental cooperation, has allowed this approach to be effective. However, as Kirkland continues to grow, a more centralized leadership will provide a positive focus for efficient programming and critical public engagement.

Urban forestry operations are currently funded through a variety of sources, including the Surface Water Utility Fund, the General Fund, Capital Improvement Projects (CIP), grants, and REET funding. However, with staff dedicated to a variety of tasks in addition to urban forestry, there is no itemized accounting that could be described as an urban forest budget. While each of these departments appreciates the value of the urban forests, they must balance the needs of trees with other responsibilities and available resources. As a result, tree care activities are limited to mostly reactionary decisions rather than a proactive management approach and the City's Urban Forester, a temporary, part-time position, is limited to grant administration and project management for special urban forestry-related projects.

Community Involvement – (This section pending, awaiting data from the online survey and public engagement process)

Gap Analysis and Plan Goals

With the information gathered in the program review and using the criteria established in "A Model of Urban Forest Sustainability" (Clark, et al, 1997) (Appendix A) and the guidelines from "A Framework for Strategic Urban Forest Management Planning and Monitoring" (Kenney, et al, 2011), a gap analysis was generated to identify the strengths and weaknesses of City's urban forestry program. Based on the review and this analysis, the City established four overarching goals to guide the direction of the Urban Forest Management Plan:

- Urban forestry program
- Canopy
- Public engagement, outreach and education
- Program funding

Over the next 20 years, these goals will provide managers and City leaders with a long-range vision for Kirkland's urban forest resource and the City's urban forestry program. The goals and supporting objectives outlined in Section 4 are aimed at addressing the identified gaps between existing conditions and optimal performance, and include the objectives critical to the Plan, including establishing a formally recognized forestry program with dedicated staffing resources and maintaining a comprehensive inventory or street and park trees, as well as objectives to increase outreach and explore alternative funding sources.

1. Introduction

An urban forest is the collection of trees and woody shrubs, both public and private that grow within a city and its suburbs. Besides the obvious aesthetic benefits, urban forests provide many important environmental, social, and economic benefits to a community, including benefits to air and water quality, reduced energy needs, wildlife habitat, and modifications to local climate. Kirkland's urban forest is a valuable natural resource that promotes the quality of life and mitigates the effects of urbanization on the local environment.

Autumn in downtown Kirkland

As a living and vital component of a city's infrastructure, urban trees are now considered "green infrastructure." Trees' proximity to other infrastructure elements such as streets, signals, buildings and utilities negatively impact trees and shorten their normal life expectancy. These impacts include constrained planting spaces that limit natural development, compacted and poor quality soils (Urban, 2008), reflected heat, and limited water. For this reason, the urban forest requires sound and deliberate management to ensure that trees function well in their intended landscape, provide optimal benefits to the community, and remain reasonably safe for adjacent property and people.

More often, cities are recognizing trees as capital investments and as a critical part of the urban environment. Currently, 83 cities in Washington, including Kirkland, qualify as a Tree City USA (National Arbor Day Foundation, 2011), evidence that these communities recognize the importance of trees and their contribution to the quality of life. To preserve the value and benefits of their tree resources, many cities measure their forest assets, establish protection ordinances, develop a long-term vision for its urban forest, and determine management goals.

The City of Kirkland values their urban forest and recognizes that its protection and management requires considerable forethought and vision. Historically, the City's tree preservation and planting efforts have been aligned with growth and development; policies that have been particularly relevant over the last decade. Many potential strategies and goals for managing Kirkland's urban forest that were identified in a 2001 Tree Management Review and the 2003 Natural Resource Management Plan have been achieved to date, advancing Kirkland's urban forest policy and programming.

With a recent annexation, the City of Kirkland has grown significantly, increasing its population to over 81,000 people and its urban forest. In response to this growth, the City determined that it was necessary to reexamine the processes and policies that guide their urban forestry program and to establish new goals and strategies that support the community's expectations. This plan was intended to identify and develop:

- Strategies to increase program efficiency and cost-effectiveness

- Opportunities for improvements or updates to policy and regulation
- Updated goals that support the sustainability and health of Kirkland's urban forest

Ensuring an ongoing succession of healthy trees can be challenging. This Urban Forest Management Plan is intended to provide guidance to Kirkland's urban forestry efforts over the next 20 years, ensuring that efforts are effectual on a daily basis and that long term goals are achieved in the most efficient and cost-effective manner with the least liability. It builds upon the community's vision, serving as a 'road map' for community leaders, volunteers, and City staff as a summary resource for better urban forestry management.

1.1 About Kirkland

Located across Lake Washington from Seattle, the City of Kirkland is an attractive, vibrant lakefront community situated north of Bellevue, south of Bothell and Woodinville, and west of Redmond in King County, Washington. The City is approximately 18 square miles with a population of about 82,000. Kirkland maintains a distinctive downtown waterfront character with restaurants, art galleries, a performing arts center, public parks, including beaches, and a collection of public art. Having the only downtown frontage located on Lake Washington's eastern shore, Kirkland has a unique history and character of its own, particularly in relation to its urban forest.

History of Kirkland's Urban Forest

Prior to the arrival of the first Euro-American settlers in the late 1860's, the lake and surrounding area provided abundant resources for the original Native American inhabitants from the Duwamish tribe (Harvey, 1992). At that time, the temperate Pacific Northwest forest was dominated by Douglas fir, Western red cedar and mixed hardwood species such as Bigleaf maple, cottonwood and alder. To open up clearings and provide browse for game animals and space to cultivate camas bulb, small areas were cleared by periodic burning. Early homesteaders also cleared land for farming, creating "stump ranches" and burn piles from the large conifers that extended to the lakeshore from what is now the Houghton neighborhood (Sundberg, 2012).

Kirkland map, 1897 (Courtesy of Loita Hawkinson)

Inland growth was slow as the land beyond the shoreline was densely forested and few decent roads for overland travel existed. Historical records and maps show that just enough local timber was cut to clear sections of land to support early growth and industry; much of the timber resource remained, even around the town's first shingle mill. Where old growth conifers were

removed, fast-growing native deciduous species such as Bigleaf maple re-colonized instead. Without further disturbance, the native conifer forest would typically re-establish over the course of time; however, due to increasing development, the regeneration of Kirkland's native conifer forests was unlikely to occur naturally.

Eventually, the original inhabitant and homesteader farms gave way to a small town that would support British businessman Peter Kirk's vision for a steel mill. Completed in 1880, the mill was located on Rose Hill, two miles from the lake's shore. Due to a financial crisis the steel mill closed without producing any steel in 1893. Kirkland became prosperous again with the successful operation of the state's first wool mill, which supplied goods for the Klondike gold rush. The Anderson Steamboat Company initially built steamboats to ferry passengers to and from Seattle in the late 1800's to the mid 1900's. The completion of the Lake Washington Ship Canal in 1934 and the onset of World War I brought further expansion to the shipbuilding industry in Kirkland, which had become a bedroom community for workers who commuted by ferry to Seattle (Stein, 1998).

Peter Kirk

After its incorporation in 1905, Kirkland's homes, businesses and streets steadily grew, leaving the native forest remnants behind, both intentionally and unintentionally, to became part of the urban forest that exists today. As shade, ornamental and food-source trees were planted, the tree species diversity changed over time, too. Scandinavian settlers planted birch trees on Big Finn Hill to partake in the traditional use of softened birch-branch switching during sauna (Hawkinson, 2012). In 1928, the Forbes family built a two-story bathhouse at Juanita Beach and planted 150 cottonwood trees, some of which have survived and to this day cover the neighborhood with white fluff during the spring bloom. Oaks and maple trees were planted to beautify landscapes, and small cherry and apple orchards became commonplace on many properties.

Kirkland's modest growth continued after World War II until the SR 520 floating bridge was constructed in 1963, connecting Kirkland to the major metropolitan city of Seattle. As a result, Kirkland's population increased dramatically in the following two decades, especially with the annexations of Houghton, Totem Lake, South Juanita, North Rose Hill, and South Rose Hill. Unfortunately, the rapid growth and development resulted in increased pollution in Lake Washington and a decline in environmental quality (City of Kirkland, 2004).

The Community's Vision

Acquisition of Kirkland's renowned waterfront parks has been an ongoing effort with the vision and determination of community leaders and City officials since the 1920's. It wasn't until the 1990's, in response to the Growth Management Act, that the importance of the urban forest resource was recognized in the City's Comprehensive Plan. This guiding policy document is a result of the community's efforts to establish a vision for Kirkland in 2022. It reflects the support and appreciation for a healthy environment and defines the community's values in its vision statements and Framework Goals:

"*We consider community stewardship of the environment to be very important"* (II.A), and

"We have an opportunity and a responsibility to create a sustainable community that balances urban growth with natural resource protection" (II.FG-7).

In 2002, the City estimated its canopy cover to be 32 percent. Further direction was provided from the community by establishing a Comprehensive Plan policy revision that directed the City to *"Work toward increasing Kirkland's tree cover to 40 percent"* (V-8 Policy NE-3.1).

Because the community recognized that significant improvements in aesthetic, environmental and economic benefits could be realized if average tree cover were to be increased to 40 percent, the Kirkland City Council adopted a comprehensive tree protection code in late 2005.

Kirkland's Present-Day Urban Forest

Since 2005, Kirkland has hired dedicated urban forestry staff, collected asset data about its urban forest and continued to engage the community in support of protecting Kirkland's urban forest. In 2008, the Kirkland City Council adopted a 20-Year Forest Restoration Plan to promote the stewardship of native open space areas located in parkland. Aside from the Green Kirkland Partnership efforts, no formal tree planting programs have been developed since the Centennial Tree Project in 2005. This project funded tree planting in parks and planting strips adjacent to rights-of-way to commemorate the 100th birthday of Kirkland. In 2009, Kirkland became the first city certified as a Community Wildlife Habitat by the National Wildlife Federation. Kirkland has maintained its Tree City USA status for ten consecutive years and has been the recipient of two Growth Awards from the National Arbor Day Foundation. As a Tree City USA, Kirkland has qualified to receive state and federal agency grant awards.

Pines and sequoia at Marina Park

With a recent annexation in 2011, the City of Kirkland nearly doubled its area and significantly increased its population, making it the 12th largest City in Washington State. As a consequence, the City also increased its urban forest resource considerably. Including the annexed neighborhoods of Finn Hill, Juanita and Kingsgate, the City has 4,637 acres of trees or 40.7% urban tree canopy (UTC). The annexation increased Kirkland's UTC from 36% to 40.7% due to a large presence of single family residential and park/open space zoning areas which had high canopy cover. As a result, 60% of all tree canopy is found on single family residential properties, while 14.6% canopy is distributed in parks and open space. (AMEC, 2011). While Kirkland has committed to accept its share of growth and development, the challenge becomes balancing this growth while maintaining a livable community.

"Whereas, a healthy sustainable forest provides a natural way to filter stormwater runoff, remove carbon from the air and provide important recreation opportunities for city residents to connect with nature…"

Kirkland City Council Resolution R-4689, 2008

1.2 Benefits of the Urban Forest

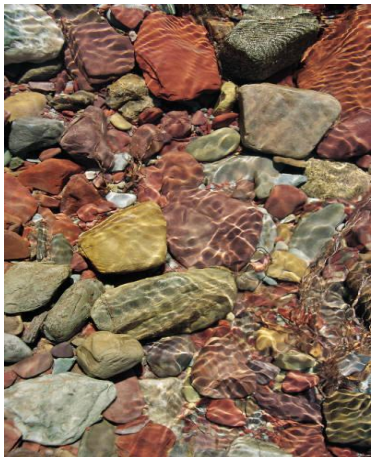
Currently, 83.7% of all Americans live in metropolitan areas, where it's particularly important for trees to provide environmental, social and aesthetic benefits. Urban planners and architects recognize that trees are elements that contribute to a great city (Benfield, 2012). Urban residents report they like where they are living more and feel safer than residents who have fewer trees around them (Sullivan, 1996). A majority of people feel that trees improve one's quality of life (Lohr, 2004).

Many of the contributions that trees make are associated with a low cost-to-benefit ratio. For instance, green streets, rain barrels, and tree planting are estimated to be 3-6 times more effective in managing stormwater than conventional methods per $1,000 invested (Foster, et al. 2011). Portland, Oregon is saving 43 percent ($64 million) by integrating green infrastructure – including planting 4,000 trees – into its innovative stormwater infrastructure (Rosen, 2011).

More and more research shows the enormous contributions that trees make to our cities in terms of public health, stormwater mitigation, energy usage, economic stability, and air, water and soil quality improvements. Quantifiable benefits from urban forests include the following:

Water Quality and Stream Flow

Urban stormwater runoff is a major source contamination for Lake Washington and riparian areas throughout Kirkland, threatening both human health and wildlife, including salmon populations. Requirements for surface water management are becoming more stringent and costly for both developers and the City. Runoff volumes, peak stream flows and flooding incidents can be reduced by incorporating trees into stormwater management planning; lessening the need for constructing expensive detention facilities and the cost of treatment to remove sediment and other pollutants (Fazio, 2011). Trees improve and protect water quality in the following ways:



Interception - Trees intercept rainfall in their canopy, which acts as a mini-reservoir. Some water evaporates from the canopy, and some slowly soaks into the ground, reducing the total amount of runoff. (Xiao et al, 1998). Canopy interception also lessens soil compaction, which in turn further reduces runoff.

Increased soil capacity and infiltration - Root growth and decomposition increase the capacity and rate of soil infiltration by rainfall and snowmelt (McPherson et al, 2002), resulting in even percolation rates and increased filtration of contaminants.

Reduced soil erosion – Tree roots reduce the flow and volume of stormwater runoff, avoiding erosion and preventing sediments and other pollutants from entering streams, rivers, Lake Washington, and the Puget Sound.

Provide salmon habitat – Shade from trees helps to cool warm urban runoff, which poses a threat to anadromous fish, like salmon. Shade from trees provides lakeside and riparian habitat for salmon and cools water temperatures, increasing dissolved oxygen, which is essential to salmon survival.

Air Quality

Air pollution is a serious health threat that causes asthma, coughing, headaches, respiratory and heart disease, and cancer. According to the Puget Sound Clean Air Agency, in 2010 the Air Quality Index continued to be "good" for most days in the Puget Sound, however air quality degrades into the "moderate" category approximately one tenth of the time and to "unhealthy for sensitive groups" for brief periods, as evidenced by periodic regional burn bans. Trees are efficient air-cleaning machines, improving air quality in the following ways:

Coast redwood on Lake Street

Absorb gaseous pollutants - Trees and forests absorb harmful gaseous pollutants like ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO) and sulfur dioxide (SO_2) (McPherson et al. 1999; Nowak 1992; Rowntree et al. 1991).

Reduce particulate matter - Trees intercept particulate matter (PM_{10}), including dust, ash, pollen, and smoke. The particulates are filtered and held in the tree canopy where they are eventually washed harmlessly to the ground. Mature trees absorb 120-240 lbs of particulate pollution each year (University of Washington, 1998).

Ozone and VOC reduction - Shade and transpiration reduce the formation of ozone ($O_{3)}$, which is brought on by higher temperatures. Some trees can absorb more volatile organic compounds (VOCs) than previously thought (Karl, T. et al; Science NOW, 2010). VOCs are a class of carbon-based particles emitted from automobile exhaust, lawnmowers, and other human activities.

Increase oxygen levels - Trees and vegetation increase oxygen levels in the atmosphere through photosynthesis.

Carbon Sequestration

Trees absorb atmospheric carbon dioxide (CO_2), reducing carbon emissions that contribute to greenhouse gases. The carbon-related function of trees is measured in two ways: *carbon storage* (total stored in tree biomass) and *carbon sequestration* (the absorption rate per year) (Jo, et al., 1995). Urban trees reduce atmospheric carbon in two ways:

Directly – Through growth and the sequestration of carbon as wood and foliar biomass.

Indirectly – By lowering the demand for heating and air conditioning, thereby reducing the emissions associated with electric power generation and natural gas consumption.

Each year, an acre of canopy absorbs the amount of carbon produced by driving a car for 26,000 miles (Nowak). That's the same as driving from Kirkland to West Palm Beach, Florida and back four times!

As a founding member of the King County Climate Change Collaborative, the City of Kirkland recognizes that greenhouse gases contribute to global climate change. The City has also become a member of the International Council for Local Environmental Initiatives (ICLEI) in order to effectively fulfill its commitments. ICLEI is an international association of over 1,000 local

governments providing national leadership on climate protection and sustainable development. In 2009, the City Council adopted *A Climate Protection Action Plan* to achieve targeted reduction of greenhouse gases according to ICLEI milestones. Kirkland's canopy cover has been identified as a performance measure contributing to this plan's success.

Energy Conservation

Electric and gas utilities develop energy conservation solutions to keep rates low for their customers, reduce their need to build new lines, and ultimately, to be good environmental stewards. Utility companies with energy services that affect Kirkland residents include Puget Sound Energy and Seattle's City Light Department. Both organizations recognize how trees can reduce energy consumption and encourage Kirkland residents to consider planting trees as a cooperative strategy for improving energy conservation. Urban trees and forests modify the environment and conserve energy in four principal ways:

Shade dwellings and impervious surfaces – Impervious surfaces in 2011 were assessed as 36% of the total land base (Kirkland, 2011). Shade from trees reduces the amount of radiant energy absorbed and stored by these impervious surfaces, thereby reducing the *urban heat island effect*, a term that describes the increase in urban temperatures in relation to surrounding urban infrastructure (Stone, 2012). Shade from trees also reduces the amount of energy used to cool a structure (Simpson, 2002).

Evapotranspiration – Evapotranspiration is the release of water vapor from tree canopies, cooling the surrounding area. Through shade and transpiration, trees and other vegetation within an urban setting modify the environment and reduce heat island effects. Temperature differences of more than 9°F (5°C) have been observed between city centers without adequate canopy cover and more forested suburban areas (Akbari, et al., 1997).

Wind reduction – Trees reduce wind speeds by up to 50% and influence the movement of air and pollutants along streets and out of urban canyons. By reducing air movement into buildings and against conductive surfaces (e.g., glass, metal siding), trees reduce conductive heat loss from buildings, translating into potential annual heating savings of 25% (Heisler, 1986).

Green roofs – Native trees and vegetation on rooftops can help reduce the urban heat island effect, decrease the heat loss through rooftops and provide a beautiful addition, not only for enjoyment to humans, but also contribute to the success of the community's ecosystem by increasing habitat for all living creatures (Department of Energy, 2004).

> *The indirect cooling effect of evapotranspiration is greater than the direct effect of shading. As the number of trees in an area increase, relative contribution of evapotranspiration to overall cooling goes up, mitigating the urban heat island effect.*
>
> ***Solecki, et al., 2005***

Social and Economic Benefits

Trees create livable cities on an aesthetic level, but also in terms of health, safety, and economic stability. Trees contribute to the improved physical and psychological health of urban residents, creating an atmosphere conducive to community participation. These benefits contribute to Kirkland's attractiveness as a place to work, live, and play:

Trees and landscaping encourage outdoor activity

Health and well-being – Exposure to nature has a healthy impact on people, including higher test scores with kids, reduced symptoms of Attention Deficit Disorder (ADD), and faster recovery times following surgery (Wolf, 1998). Residents of areas with the highest levels of greenery were three times as likely to be physically active and 40 percent less likely to be overweight or obese than residents living in the least green settings (Ellaway, et al., 2005).

Reductions in crime – Results of a Portland crime study found that street trees fronting a house reduced 44 crime occurrences. The net effect of all trees was a reduction in 33 crimes (Donovan, et al., 2010). Empirical evidence shows a connection between trees and reduced violent crime and theft (Kuo, et al., 2001).

Increased property values – On average, street trees add $7,020 to home sales prices in Portland, Oregon and reduced time on the market by 1.7 days. The increase in property value with trees extends to neighboring houses (Donovan, 2010). A study found 7 percent higher rental rates for commercial offices having high quality landscapes (Laverne, 2003).

Economic stability – In business districts and commercial areas, trees have been shown to stimulate more frequent shopping trips and a willingness to pay more for parking. Consumers travel further, shop longer and spend 9 to 12 percent more in business districts with trees (Wolf, 2005, 2007).

The cumulative benefits of trees contribute to making Kirkland a healthier and more desirable community. Numerous other benefits, such as wildlife habitat, biodiversity, and scenic values, have been traditionally regarded as free social goods. Undervaluing these services in economic decisions may result in an unhealthy urban forest vulnerable to development and conversion to other uses.

The wide range of benefits provides a strong justification to support the expansion of tree cover in urban areas. However, in reality, this can be very challenging. Protection of existing trees and planting new trees in suitable locations, particularly in denser areas, requires careful planning. Furthermore, tree protection and planting should be balanced with, not at the expense of, urban intensification and infrastructure elements that are also intended to support sustainable communities.

The key to urban conservation is to find the balance between the seemingly conflicting goals of allowing development density and protecting natural resources.

Metropolitan Greenspaces Program, Portland, Oregon

Calculating the Economic Benefits of Trees

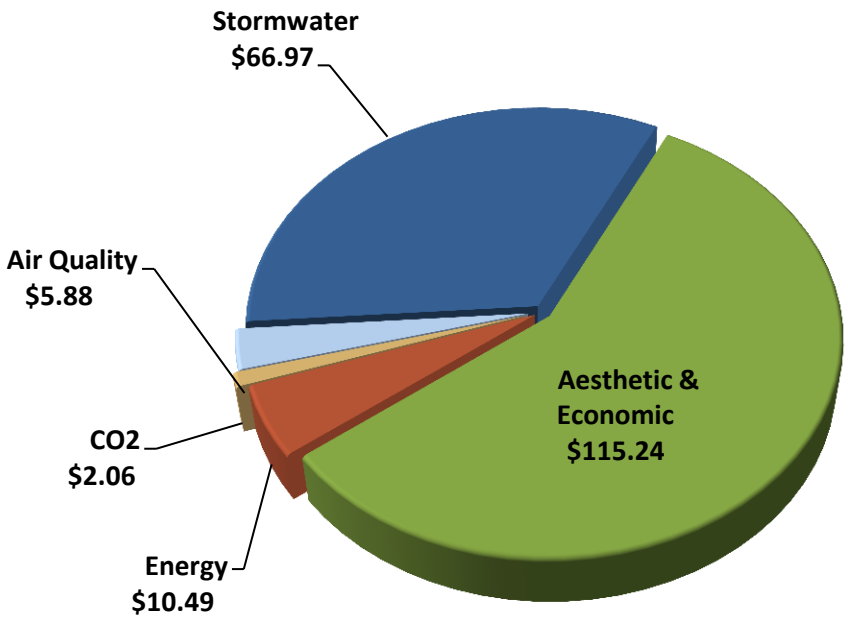
The expertise of ecologists, scientists and engineers and modern computer technology has provided an enormous body of work establishing the benefits of trees. Because of this, trees are of great value to a community and are often regarded by cities as capital assets. Unlike most other components of city infrastructure, a well-maintained tree population *appreciates* in value, making significant contributions to the environment and the community over time.

Cities large and small across the country have begun to regard their urban forest as green infrastructure, quantifying the monetary value of trees in terms of the ecosystem services they provide. By calculating the environmental services provided by urban forests, a cost-benefit comparison can be made with systems that would otherwise be designed, engineered, constructed and maintained. Generally speaking, nonstructural methods, including trees, can provide a greater range of benefits at a lower cost to the municipality, providing the justification for better urban forest management.

Mapping canopy cover and collecting inventory data on public trees is the first step to quantifying the overall benefits of an urban forest. Using this data along with software programs such as the USDA Forest Service i-Tree suite, a city can calculate the annual benefits derived from its urban forest. With the addition of regional environmental data and the City's management costs, cities can conduct a cost versus benefit ratio analysis.

In the absence of a complete or up-to-date tree inventory and benefits analysis, the National Tree Benefit Calculator (www.treebenefits.com) can help tree owners estimate the value of benefits from individual trees. For example, a mature, 24-inch diameter, red maple (*Acer rubrum*), located on a residential street in Kirkland is estimated to provide $201 in annual benefits (Figure 1).

Figure 1. Annual benefits of a 24-inch dbh red maple in Kirkland



Throughout this report, there is reference to software programs that can be of immense help to planners and others determined to improve the forests in their community. Two, in particular, are widely used: CITYgreen and i-Tree. This sidebar presents a brief summary of each. To gather further, up-to-date information, consult the respective websites www.americanforests.org/productsandpubs/citygreen/ and www.itreetools.org/

CITYgreen is a GIS-based software tool that analyzes the ecological & economic benefits of tree canopy and other landscape features. The software calculates dollar benefits for ecosystem services (eg., stormwater runoff, air and water pollution removal, and carbon sequestration and storage) provided by land cover within a specified geographic area. CITYgreen, developed by American Forests, is an extension to ESRI's (Environmental Systems Research Institute) ArcGIS and works with Windows-based PCs that have ArcGIS.

The analysis is based on a land cover dataset derived from either aerial photography of satellite imagery and data specific to the area such as soil type, climate, and rainfall. The dataset is first "classified" into various landcover features such as tree canopy, open space, impervious surfaces, water, etc. before CITYgreen can analyze the data.

The analysis findings are summarized in easy-to-read reports that stratify each land cover feature in acres and as a percentage of the total area. This information is very useful when communities are establishing tree canopy goals or managing land use. The City of Kirkland has obtained this information with its 2011 Urban Tree Canopy Assessment.

One of the most powerful features of CITYgreen is the ability to analyze alternate land cover scenarios. Starting with a current land cover map, users can calculate the effects of future land cover changes without are made. With land cover maps from earlier time periods, users can also compare how land cover has changed over time and how these changes affect the land's ecosystem services. This becomes an important decision-making tool. Communities can see how historic land change trends affected air and water quality and use this information to guide their land-use planning in the future.

i-Tree is a suite of programs that can be used by companies of all sizes to inventory, evaluate, and assess the benefits of urban and community forests. Developed by U.S. Forest Service Research, State and Private Forestry, and other cooperators, i-Tree is offered free of charge to anyone wishing to use it. The i-Tree software suite includes the following urban forest analysis tools:

UFORE (Urban Forest Effects Model) is designed to use standardized field data from randomly located plots throughout a community and local hourly air pollution and meteorological data to quantify urban forest structure and numerous urban forest effects and benefits.

STRATUM (Street Tree Resource Analysis Tool for Urban Forest Managers) uses a sample or existing tree inventory to describe tree management needs and quantify the value of annual environmental and aesthetic benefits such as energy conservations, air quality improvement, CO2 reduction, stormwater control, and property value increases.

In addition to the analysis programs in i-Tree, the following utilities are also included:

MCTI (Mobile Community Tree Inventory) is a basic tree inventory application that allows communities to conduct tree inventories and analysis at various levels of detail and effort. Data can be collected and entered into the program using paper tally sheets or a Personal Digital Assistant (PDA) using new or existing inventories.

The ***Storm Damage Assessment Protocol*** provides a standardized method to assess widespread storm damage in a simple, credible, and efficient manner immediately after a severe storm. It is adaptable to various community types and sizes, and provides information on the time and funds needed to mitigate storm damage.

- Hand-held Personal Digital Assistant (PDA) programs to collect field data.
- Plot selection programs to determine where to collect sample field data.
- Report writers to generate reports, graphs, charts, and tables to summarize data and results in an easily understandable format.

1.3 Strategic Plan Overview

The purpose of this strategic plan is to ensure the sustainability of Kirkland's urban forest in order to optimize the ecosystem services provided by trees city-wide. It is developed in response to significant changes in Kirkland, including a major land annexation and the prior achievement of goals established in previous management documents. The framework and methodology for these efforts is outlined below.

Framework

Serving as a 'road map' for community leaders, volunteers, and City staff, this Plan is intended to provide long-term, consistent guidance to Kirkland's city-wide urban forestry efforts over the next twenty years. A twenty-year horizon is a reasonable time to achieve tangible urban forest goals for two reasons: a long term planning horizon is needed to sustain various municipal budget shifts, and trees are slow to respond to changes, good or bad.

This Plan provides the over-arching goals of a long-range strategic framework and outlines the first Five Year Management Plan (2013-2018). The Five Year Management Plan (Section 4.5) links the high-level 20 year strategic objectives with the daily on-the-ground operations. This report is intended to provide the guidance needed for developing subsequent five year plans.

The third level of planning, typically addressed with an Annual Operating Plan, directs day-to-day operations, essential for projecting budget requirements and developing work programs. Incorporating long-range goals into regular routines increases efficiency and levels of service, reduces risk, and results in greater cost-effectiveness. The political and managerial structures of the City have not fully accounted for the budget and staffing resources that support the goals outlined in this plan; therefore this level of planning has not been detailed herein.

The Plan is formatted in accordance to Washington State's Evergreen Communities Task Force, *A Guide to Community and Urban Forestry Programming* (Washington State Department of Commerce, 2009).

Methodology

To identify the challenges related to better urban forestry management and provide a sustainable guide for efficient urban forestry management, a thorough review of the City's current forestry-related management practices and policies was conducted. Four focus areas emerged that define the environmental, economic, and social components of urban forests. These were identified as:

- The Urban Forest Asset
- The City's Guiding Policies and Regulatory Framework
- The Municipal Urban Forestry Program
- Community Involvement

Section 2 further defines the four focus areas, and Section 4 describes goals, strategies and recommendations relative to these four focus areas.

To clearly identify achievements and opportunities for improvement, Kirkland's performance in each of these areas is examined and assessed in Section 2.6. The criteria for performance are based on *A Model of Urban Forest Sustainability* (Clark et al, 1997), a business model approach to efficient urban forest management using detailed performance measures as outlined in Appendix A. Each performance criteria has an indicator of low, moderate, good or optimal performance. For the City's overall performance, the individual results are compiled and analyzed.

The basis for the gap analysis used to assess Kirkland's existing urban forestry practices is derived from *Criteria and Indicators for Strategic Urban Forest Planning and Management* (Kenney et al. 2011). The gaps and opportunities identified in each of these sections help to further refine the goals, strategies and recommendations identified in the Five Year Management Plan in Section 4.2; which also provides some direction for subsequent management plans.

A comparison of Kirkland's current status to best management practices provides the findings and rationale for the goals, strategies and recommendations proposed in Section 4. The multi-departmental Project Team provided direction for research into City codes, relevant best management practices from current scientific and technical literature, City documents and policies reviewed in Section 2.

A total of 15 interviews with representatives from the Planning, Public Works, Human Resources, GIS and Parks and Community Services departments took place to solicit information about staff experience with urban forestry-related policies and tasks. The discussions generally focused on employees' specific areas of expertise and explored the best ways to apply their knowledge to Kirkland's urban forestry program. The interview information was used to develop Section 2.3 and was utilized to assess Kirkland's urban forest performance in Section 2.6.

The information used to compare local municipal urban forestry programs in Section 2.4 is based on Tree City USA program expenditures for 2010 and 2011 reporting to the National Arbor Day Foundation and as provided to the Washington State Department of Natural Resources Urban and Community Forestry Division.

Community Outreach – *NOTE: This section is currently pending completion of public outreach efforts

Efforts to proactively manage urban forests to provide the greatest amount of benefits requires a targeted, strategic approach that is collaborative in nature and considers the wide range of stakeholders with interests in urban forest sustainability. To ensure that the City's efforts are effective, public input was sought during the development of this Plan, outlined in Section 3 and Appendix B and C. Without community involvement, it would be difficult to improve tree health and diversity on public and private properties, support mitigating risks to public safety, and maximize the wide-ranging benefits provided by a healthy and sustainable urban forest. An online survey was conducted using Survey Monkey [tm] to gauge the community's interest in the following:

- Vision and overall sentiment related to trees and ecological systems
- Understanding of tree-related codes and policies
- Priorities for managing the urban forest resource

To review and consider input and ideas from various external stakeholders, the City has partnered with Forterra to conduct focus group meetings targeting the development and business communities, arborists and tree care professionals, and the general public and environmental groups. The data from the public outreach is compiled into a summary report with an analysis of responses, general trends and issues that were of concern.

Monitoring & Revisions

As with successful business modeling, the plan was designed to be adaptive to change, even if the criteria and indicators change over time. The concept of adaptive management is directly linked to the idea of monitoring, and firmly embedded as a guiding principle of strategic planning and management. The effects or results of the initial approach must be monitored in a systematic manner so that any required adjustments can be made based on the experience gained and new information. The successes and shortcomings experienced after the first five-year management planning period should be reviewed, and findings incorporated into the subsequent management plan (Figure 2). Reviews should be undertaken in the final year of each management planning cycle, ideally in consultation with a technical advisory committee and key stakeholders. See Section 4.7 for more detail.

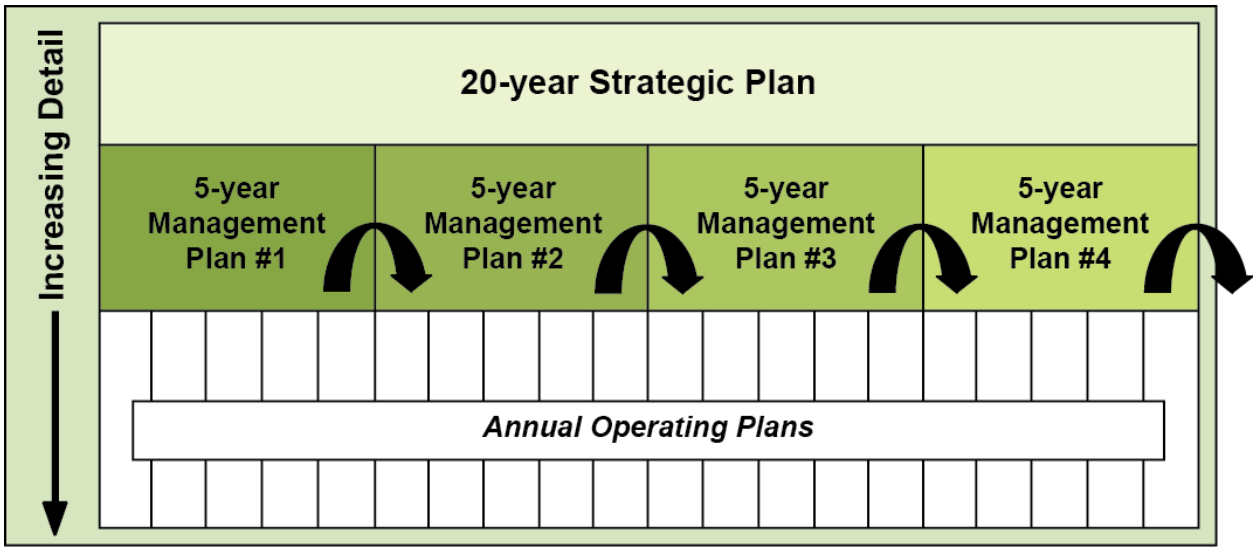


Figure 2. Framework for an adaptive plan that includes monitoring and revisions

The resulting feedback loop that is created for the plan is important especially with regards to a dynamic natural system; forested ecosystems are dynamic and complex entities, particularly within urban settings. On an annual basis or in coordination with Kirkland's biannual budget cycles, this strategic plan enables community leaders, volunteers, and City staff to develop work plans that align for achievement of the long-range strategic goals and operational objectives. The result is that the plan remains effective and relevant to the community through 2033 while providing a template for extending into the next 20 years.

2. Review of Current Practices

This section reviews the existing urban forest management practices in the City of Kirkland. As mentioned in the previous section, the environmental, economic, and social components of a municipal urban forest were divided into four primary focus areas:

The Urban Forest Asset – the individual and collective tree resource and the current level of knowledge about the structure, condition, and benefits of the asset

Guiding Policies and Regulatory Framework – the official documents, policies and codes that outline the vision, goals and strategies guiding the urban forestry program

The Municipal Urban Forestry Program - – the organization of municipal staff and financial resources dedicated to the care, preservation, and management of the urban forest.

Community Involvement – a review of groups and individuals outside the general management structure of the City who are aware and engaged in urban forest sustainability, advocacy, volunteerism, and partnerships

Examining each of these areas enables managers to more effectively allocate limited resources with the objective of moving towards optimal performance levels and sustainability. Paired with the performance indicator ratings in Section 2.6, this information establishes a baseline assessment of Kirkland's urban forest performance. This information is an invaluable tool for tracking the successes and shortcomings of each five-year management plan.

2.1 The Urban Forest Asset

Business models emphasize the importance of asset inventories, affirming "you can't manage what you don't know you have." Thorough knowledge of the urban forest asset is the basis of effective management and planning. This includes knowing the quantity, structure, benefits, and the cost of caring for the urban forest asset. Structure describes the overall tree population including species and age diversity, the distribution of varying tree ages and species, and the condition, risk potential, and value of trees.

Understanding the asset's structure can help managers to better plan for sustainability and succession, guard against catastrophic losses from pests and disease, and identify both under- and high-performing species. Quantifying the benefits from the urban forest can help managers and advocates communicate the value of the urban forest to residents, developers, and city leaders. A cost-benefit analysis can prove critical to budget development and the justification of municipal resources.

An urban forest asset: the trees themselves

This section describes Kirkland's current understanding of the structure and function of its urban forest. It summarizes available information such as planning documents and current electronic databases including the partial tree inventory and canopy assessment data.

Measuring the Urban Forest

Measuring and assessing the urban forest can be done in several ways: from inventorying individual trees in specific groups or areas, such as right-of-way street tree inventories; to using overhead imagery such as canopy assessments or broader urban forest resource analysis such as i-Tree Eco (see sidebar). The type of asset inventory used may also vary depending on the extent of management in any given area. For example, intensively-managed zones such as streets may have a higher level of inventory detail than natural areas.

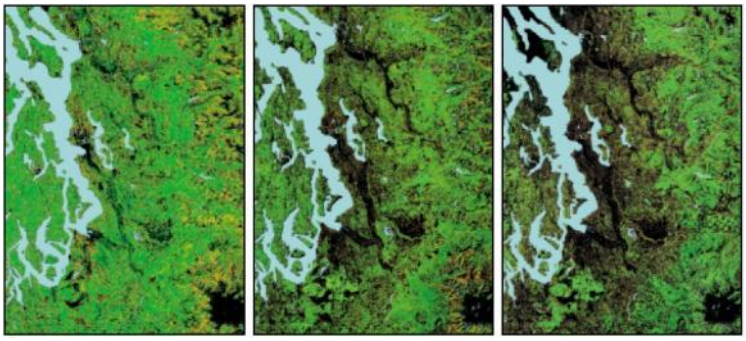
Tree canopy assessments determine the amount of tree leaf surface that is covering a large area, usually expressed in acres or square miles. Canopy assessments also measure smaller sections within a larger boundary such as land-use zones or neighborhoods, and allow a municipality to see how much of their jurisdiction is covered by trees, regardless if the trees are on public or private property. Measuring canopy can reveal quite a bit of information about a city's growth, especially if compared over time. Having recently become more readily available, cities utilize geographic information system (GIS) technology to set canopy goals, monitor changes in canopy, help with local planning, and calculate urban forests' economic value and ecosystem services. A shortcoming of urban tree canopy assessments is they lack detailed information regarding individual trees.

Tree inventories assess detailed information such as the location, quantity, species, size, and condition of trees. Cities conduct inventories of public trees to track tree maintenance, manage liability associated with tree failure, determine appropriate tree species and prioritize tree planting needs. Inventories may reveal valuable assets such as the presence of rare or endangered species that may otherwise be overlooked. While this information is very useful for managing public trees, it alone does not provide enough information for long-range planning of the citywide urban forest as public trees account for only a fraction of the urban forest.

Over the last decade, the City has conducted a partial street tree inventory, performed a vegetation assessment of its natural areas located in parks and completed a remotely-sensed high-resolution urban tree canopy assessment. The inventory information and the natural area vegetation assessment do not include the 2011 annexation area; only the canopy analysis includes Kirkland's urban forest in the newly annexed neighborhoods. **With these combined projects, the City has insufficient information about its urban forest resource according to the urban forest measurement resources available today.**

Kirkland's Urban Tree Canopy

Periodically measuring urban tree canopy is a good indicator of the impacts of development and resource protection efforts over time. To mitigate the effects of development and provide urban forest benefits to the community, the City established a 40% canopy goal based on the recommendations in an American Forests report for the Puget Sound



Impervious surfaces in black, tree cover is indicated by green

Region (American Forests, 1998). This report conveyed the dramatic decline in canopy cover associated with the rapid growth in the Puget Sound region from 1972 to 1996. The analysis placed a dollar figure on the increased cost of stormwater management and the cost of air quality controls. Based on these findings, American Forests recommended canopy cover goals for the region as follows:

- 40% tree canopy overall in the Puget Sound region
- 50% tree canopy in suburban residential areas
- 25% tree canopy in denser urban residential areas
- 15% tree canopy in Central Business Districts

Measuring urban tree canopy involves mapping the extent and location of tree canopy within the overall community boundaries. A canopy assessment completed in 2002 by the City's GIS Department determined that Kirkland had 2,151 acres of tree canopy. At that time, the City's overall canopy cover was estimated to be 31.6% (Figure 3).

To assess change over the previous decade and determine the effectiveness of its tree regulations, the City completed its most comprehensive and detailed canopy assessment (Kirkland Urban Tree Canopy Assessment Report) in 2011. Through high-resolution satellite imagery, remote sensing and geographic information system (GIS) mapping, the City's tree canopy within the pre-annexation boundaries had a net gain of 4.4% to 36% overall; an increase of 299 acres of tree canopy. As a result of the 2011 annexation, the City acquired an additional 4,561 acres of land. The canopy assessment showed that the annexed area includes an additional 2,187 acres of tree canopy, which nearly doubles the area of tree canopy. With the acquisition of the additional land area and tree canopy coverage, the City reached and exceeded its overall canopy cover goal, totaling 40.7% with annexation.

Kirkland's 2011canopy assessment provides a comparison of other land covers such as impervious surfaces, shrubs, turf/ grass/meadow and water. It also provides a more detailed evaluation of the canopy within land use zones, drainage basins, parks and open space, rights-of-way and parcel level detail. However, the data has not yet been incorporated into the City's GIS system and is only available in report form, limiting its usefulness and/or accessibility by City staff. Once incorporated, the data can provide a valuable perspective to drive strategies that target specific areas to improve urban forest canopy and optimize ecosystem benefits.

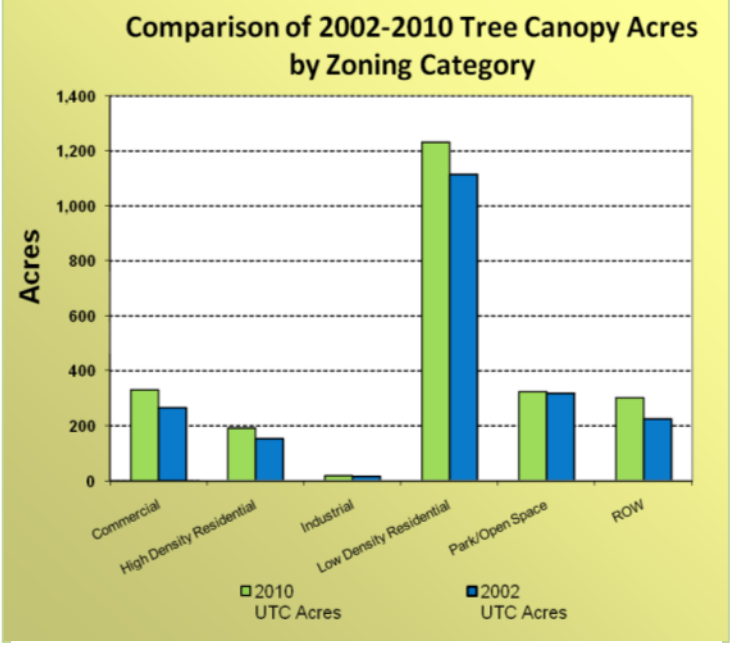


Figure 3. Kirkland's canopy changes over time

Kirkland's Public Tree Inventory

Infrastructure is a city's physical capital assets, which include the sewer system, utilities, roads, parks, and trails. Trees on streets and other rights-of-way are also important attributes of the City's infrastructure, much like light posts, signals, and sidewalks. In Kirkland, when development occurs or major arterials or collectors are improved, new street trees are installed.

Street trees enhance the City's neighborhoods

While it's generally not feasible, or necessary, to account for individual trees in open space, critical areas or naturalized areas, an inventory of public trees on streets, trails, parks, and City facilities is an important step in a comprehensive urban forest management program. A functional tree inventory should record, update and track the following:

- GIS location
- Species
- Size (usually expressed as DBH: trunk diameter at breast height, 4.5 feet above grade)
- Condition
- Risk Assessment
- Maintenance needs and history

Initially created in 2004, the City's Public Tree Inventory, formerly known as the Street Tree Inventory, is now a partial inventory of trees along the public right-of-way within the pre-annexed city boundary. Analysis of the inventory database shows the City has record of 23,404 street trees. This data was collected in 2004 and 2005. The database shows no evidence of having been edited since 2005, suggesting that there have been no follow-up inspections of these trees since they were first inventoried. Stored as a data layer in the City's GIS, the inventory is not maintained and updated by the Public Works department due to lack of staffing resources.

One of the most important indicators obtained through a tree inventory is the condition assessment. Condition is an expression of the overall health, vigor and structure of each tree and can alert managers to public safety concerns. Condition is also an indication of performance in the environment, affecting the quantity of benefits as well as the lifespan of individual trees. When Kirkland's inventory data was collected in 2005, 50% of trees were found to be in good condition and 44% were found to be in fair condition. However, because the inventory data has not been maintained or updated, the current validity of these ratings cannot be confirmed. Of additional concern, 6% of the inventoried trees (1,087) were reported as dead or in poor health; conditions that often pose the greatest risk to public safety.

Currently, there is no data on trees in formally-landscaped parks or rights-of-way in the newly-annexed areas. In late spring 2012, the City's IT-GIS staff recorded the locations of 15,226 right-of-way trees in the newly annexed areas; however, no other tree data was collected. This means that over one-third of Kirkland's total number of right-of-way trees and all trees in formally-landscaped parks are of an unknown value, size, condition, and risk potential. The latter issue has raised broad safety questions locally and nationally in cases where municipalities have been exposed to increased liability associated with tree failure (Glaberson, et al, 2012) (Marcham, 2011).

While the Public Works department uses Hanson software as a work order program and to manage other capital assets, the department does not use this software to manage the public tree assets. However, Hansen can be used to track production, performance measures, and costs associated with trees. It provides mapping links and links to the City GIS browser and is a usable data source.

In summary, the value of Kirkland's current Public Tree Inventory is limited in both scope and utility. A more complete inventory, along with an integrated system for maintaining data, can increase access to grant funding and reduce the City's liability in the event of a public tree failure. Having detailed and reasonably current knowledge of the street trees in Kirkland would facilitate access to Federal Emergency Management Agency (FEMA) funds in the event of a catastrophe. Additionally, the City would be better capable of reducing accident claims and effectively managing for the overall health of this asset. The City has the technological capacity and resources in place to store and manage inventory data within the current GIS system, however, a commitment of staff resources and additional training of field personnel will be necessary to gather and maintain the relevancy of the data.

Beyond safety, a comprehensive tree inventory provides valuable information that is critical to developing sound maintenance strategies. Some knowledge of species diversity and population frequencies can be crucial to pest and disease management and helpful when creating a planting plan. While a neighborhood or community may enjoy the consistency of a common species planted along a street, too many of any one species can have detrimental effects on the urban forest. Introduced pests or disease can easily decimate an entire species. Storms, drought and climate change can affect one species differently than another. From a management standpoint, a succession of diverse species is desirable so that, as trees age, their removal and replacements costs can be spaced over a number of years.

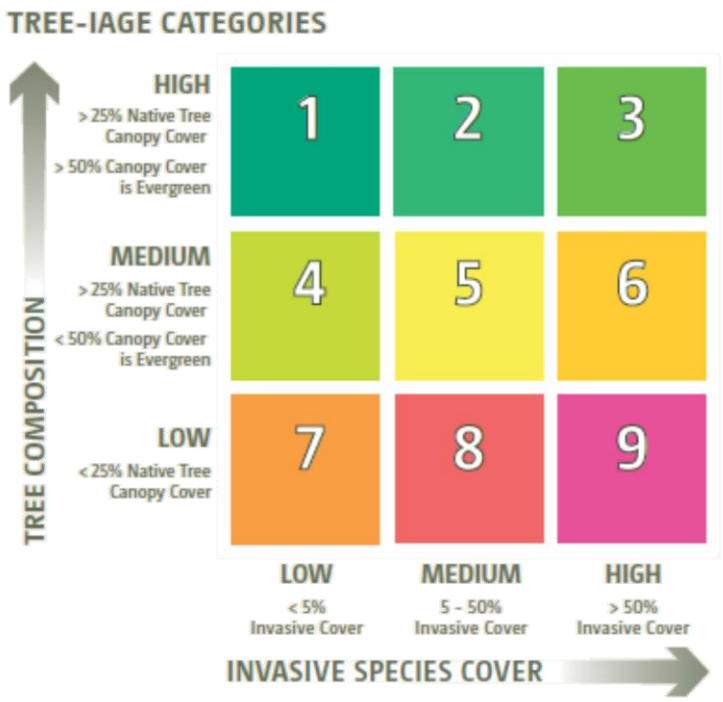
Finally, Kirkland's inventory data is difficult to access in its current format, especially for field personnel. Many cities utilize tree management software systems that are integrated into their fieldwork flow making it easy to search, generate reports, and update their inventory on a daily basis. This strategy of integrating data management into all tree related operations improves the quality of the data and facilitates the communication of urban forest management issues that emerge

> *"It's a fundamental shift in thinking…to get governments to regard green infrastructure as they do other infrastructure investment."*
>
> ***—John Griffin, former Maryland Secretary of Natural Resources***

Tree-iage Natural Area Assessment

As an additional informational resource, the City's 20-Year Forest Restoration Plan identifies and categorizes 372 acres of natural areas within city parks according to tree composition and invasive species cover (Figure 4). It defines the urban forest asset in these areas in terms of long-term sustainability and provides a detailed understanding of the ecological structure and function of publicly-owned natural areas.

Described as a Tree-iage model for assessing forest stand conditions, the natural area assessment in the Restoration Plan also considers the amount of invasive species cover, quantifying and prioritizing the maintenance needs in these natural areas for the next 20 years. The summary data and appendices in the Restoration Plan provide an additional reference for evaluating Kirkland's urban forest. While more than half (60%) of the city's forested natural areas fall within the "low" invasive threat, the remaining areas with a high threat from invasive species amount to 44 acres. Only 10% of forested city park land is classified as "high" value conifer, which is the desired condition for forested natural areas. Most of Kirkland's forested natural areas in parks are within the "medium" value forest (predominantly native deciduous canopy) categories and are managed for invasive weed species and conifer and native plant succession.



The 20 Year Restoration Plan is an excellent resource for articulating the urgent need to restore open space native vegetation and provides a long-range strategy to accomplish this. However, trees and invasive species are not limited to these acres only.

It is important to note that the Forest Restoration Plan does not address areas located in Kirkland parks after annexation, nor significant acreage of parks owned or managed by other agencies (such as Bridle Trails State Park and King County's Big Finn Hill Park), nor easements, private tracts, and greenbelts.

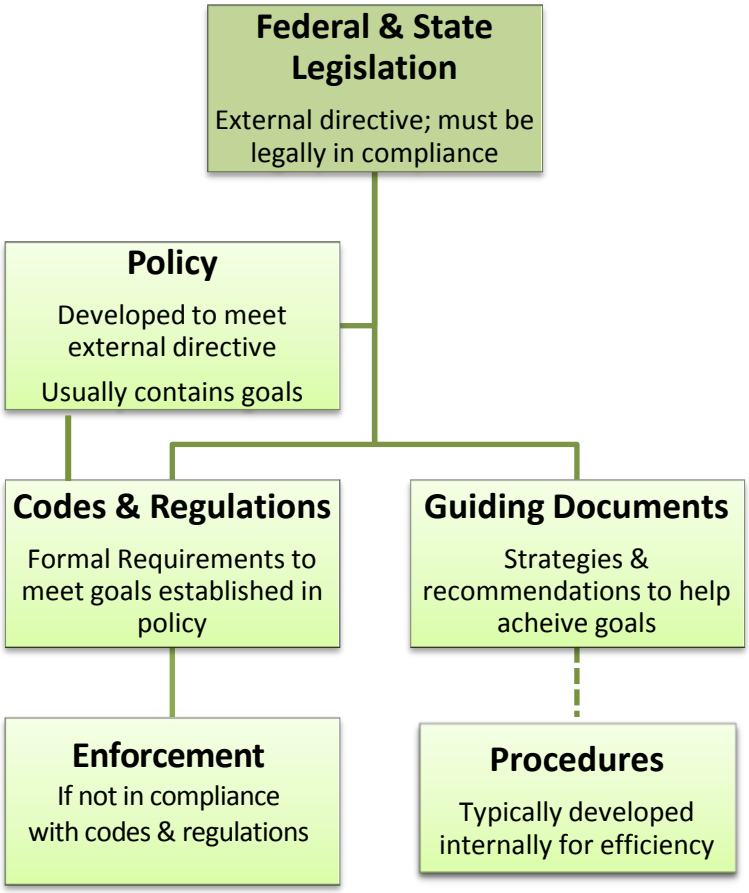
Figure 4. The Tree-iage model

2.2 Guiding Policies & Regulatory Framework

In 1990, the State Legislature adopted the Washington State Growth Management Act (Chapter 36.70A RCW) on the basis that uncoordinated and unplanned growth posed a threat to the environment, sustainable economic development and the overall quality of life in Washington. Unique among states, the Act requires that municipalities prepare their own comprehensive plans that provide for growth and development in a manner that is locally and regionally consistent, achievable, and affordable.

The Comprehensive Plan reflects Kirkland's intention to meet the requirements of GMA and to serve as the guiding policy document to attain the community's vision of the future over a 20 year timeframe. It contains framework goals and a series of elements that apply citywide. All the elements – 'Natural Environment,' for one – also contain goals, policies and narrative. Goals generally describe a desired end that the community is striving to attain, and policies are principles that reflect the City's intent. Figure 5 shows the general relationships between legislation, policy, goals, codes and guiding documents.

Figure 5. Legislation, policies, and regulations



The City establishes methods in which to achieve its goals that are based on the stated vision in the Comprehensive Plan. Typically, a combination of regulations, incentives and programs can maximize efforts towards goals; a less-balanced approach may not be as effective or may have a

polarizing effect in the community, especially regarding natural resources on private property. For resources on private property, the City should use a combination of public education and involvement, incentives to promote stewardship as well as regulations combined with effective enforcement.

This Urban Forestry Strategic Management Plan links the following goals, policies, documents and regulatory framework that were developed as tools for the management of Kirkland's urban forest asset over the last decade.

Comprehensive Plan

Kirkland's Comprehensive Plan identifies specific policies that guide the City's regulations and programs. The GMA requires public participation in the development and amendments of comprehensive plans and regulations, and that all regulations must be consistent with the goals and vision stated in cities' comprehensive plans. Kirkland's community values and vision for the future is evident in the Comprehensive Plan Framework Goals:

> **Vision FG-7**: [Kirkland has a] *"responsibility to create a sustainable community that balances urban growth with resource protection…that meets the needs of the present without sacrificing the ability of future generations and other species to meet their own needs…"*

When Kirkland's Comprehensive Plan was updated in 2005, it included policy direction to meet a citywide 40% tree canopy cover goal (Policy NE-3.1). This constituted clear direction for the City to prioritize urban forestry efforts to meet that goal. The policies in the Comprehensive Plan that were adopted to guide the City's urban forest management include:

> **Policy NE-1.3**: Use a variety of techniques to manage activities affecting air, vegetation, water, and the land to maintain or improve environmental quality, to preserve fish and wildlife habitat, to prevent degradation or loss of natural features and functions, and to minimize risks to life and property.
>
> **Policy NE-2.2**: Protect surface water functions by preserving and enhancing natural drainage systems wherever possible.
>
> **Policy NE-3.2**: Preserve healthy mature native vegetation whenever feasible.
>
> **Policy NE-3.3**: Ensure that regulations, incentives, and programs maximize the potential benefits of landscaping.
>
> **Policy NE-5.1**: Continue and enhance current actions to improve air quality and reduce greenhouse gas emissions.

The narrative for managing the natural environment in the Comprehensive Plan describes that:

> "…*the systems and features of the natural environment are considered to be community assets that significantly affect the quality of life in Kirkland. In public rights-of-way, City parks, and on other City-owned land, current technology, knowledge and industry standards should be proactively used to practice and model sound stewardship practices. For resources on private property, the City should use a combination of public education and involvement, acquisition of prime natural resource areas, and incentives to promote stewardship, as well as regulations combined with effective enforcement."*

City Council Goals

In November 2011, the City Council adopted goals to articulate their key policy and service priorities for Kirkland. The City Council Goals guide the allocation of resources through the budget and capital improvement program to assure that organizational work plans and projects are developed that incrementally move the community towards these goals. As it relates to urban forestry, the City Council has adopted a goal expressing "[The City is] committed to the protection of the natural environment through an integrated natural resource management system, and to protect our natural environment for current residents and future generations".

Natural Resource Management Plan (2003)

Adopted by City Council, this guiding document provides further policy direction and functions to refine specific policies in the Comprehensive Plan. It has served as an informational resource when considering new City practices, programs, and regulations that are proposed in response to the goals and policies in the Comprehensive Plan. Recommendations from the Natural Resource Management Plan (NRMP) provided the framework for the City's comprehensive tree codes, increased tree planting efforts and helped build community support for urban forestry.

The NRMP has been a guiding document for urban forestry efforts in the City for almost ten years. Nearly all of the goals outlined in this document have been achieved; with the exception of the following goals:

- **Proactively manage public trees** – Trees in city parks, rights-of-way, and on other city-owned properties constitute valuable public assets.
- **Private tree preservation** –Provide education on the benefits of trees on private property and on alternatives to removal.
- **Transportation standards for a green and safe streetscape** – Update street tree planting space standards and planting specifications to better accommodate a more diverse palette of tree species.
- **Notable tree program** – Develop and maintain a program to identify and preserve notable trees in Kirkland.

City Codes and Ordinance

Guided by the Natural Resource Management Plan and under the general policy direction of the Comprehensive Plan, the City established its tree protection ordinance by adopting Kirkland Zoning Code, Chapter 95 in late 2005. The purpose and intent of Chapter 95 in the Kirkland Zoning Code (KZC) is to support Comprehensive Plan Policy NE-3.1 by slowing the loss of and enhancing canopy towards the City's 40% canopy goal. The tree code establishes a process and standards to provide for the protection, preservation, replacement, and proper maintenance of trees on private and public property.

The City has codified permit requirements for the removal and pruning of public trees and for multiple tree removal on private property. (Table 1). Permits are not required for the removal of up to two (2) trees on private property within a twelve-month period. No permits are required for tree pruning on private property, however topping is not allowed. Tracking all tree removal permits can provide information about tree mortality and loss of canopy. The following table summarizes the permit requirements for trees listed by removal scenario:

Table 1. Summary of tree permit requirements in Kirkland

	SCENARIO	REVIEW? PERMIT?	MISC.
PRIVATE PROPERTY	Removal of any 2 trees per 12- month period (regardless of condition)	No review, no permit	Notification appreciated to avoid unnecessary Code Enforcement response
	Removal of hazard or nuisance trees	No review, no permit if…	Photos clearly show hazard or nuisance
	Removal of hazard or nuisance trees in critical areas	Yes, review and permit required	Arborist report may be required for multiple nuisance/hazard tree removals
	Emergency/urgent	No review, no permit	Contact Planning Dept. 2 weeks after incident
	Pruning	No	• Property owners are responsible for tree care • No topping allowed (>50% live crown removal is same as unauthorized removal)
	Tree removal associated with development	Yes, included with land use or development permit (BLD, SPL)	• Arborist report required for trees potentially impacted by development • Protection measures required on site
PUBLIC PROPERTY	Pruning or removal of street trees. Trees in medians/Central Business District maintained by the City. All other street tree care is the responsibility of the adjacent property owner.	Yes	• Public Works staff may prune street trees by property owner request • Public Works staff may remove street trees at their discretion without a permit or formal review process

In summary, the following codes contain specific language regarding tree protection, pruning and tree planting requirements on private and public property:

Kirkland Zoning Code, Chapter 95 - regarding tree removal limitations and tree protection requirements with various development scenarios

Kirkland Zoning Code, Chapter 83 - regulations concerning tree protection and restoration requirements within the Lake Washington shoreline jurisdiction

Kirkland Zoning Code Chapter 70 - Holmes Point Overlay Zone defining mature tree and native vegetation protection in the Holmes Point neighborhood

Kirkland Municipal Code Title 1, Chapter 1.2 includes the special provisions relating to enforcement of tree regulations.

Trees along streets, in parks, and on private properties are all provided with some protection within Kirkland's codes. Included in these regulations are explicit references to ANSI A300 standards for tree care and definitions for a qualified tree care professionals, both of which help to ensure that trees within the City of Kirkland are being planted and cared for according the best available science of the day.

In general, the City's tree protection codes and ordinances are serving the intent of preserving and enhancing tree canopy throughout the community while remaining flexible enough to accommodate development. This flexibility sometimes provides challenges to staff resources through requirements for additional reporting, review, and documentation. However, the 2011 canopy analysis found a 13.9% increase in canopy cover in pre-annexation areas, from 2,151 acres to 2,450 acres, and across all zoning categories, seeming to indicate that current regulations are having a positive impact.

20-Year Forest Restoration Plan (2008)

In 2008, the City adopted a 20-Year Forest Restoration Plan to promote the stewardship of native open space areas (Resolution R-4689).This long-range planning document provides guidance and recommendations for implementing goals in the Comprehensive Plan. It outlines the efforts needed to restore natural areas located in Kirkland parks.

Green Kirkland Partnership volunteers

Risks to forest health from invasive species motivated the creation of this plan to actively manage these areas. The restoration plan was organized based on a similar strategy used by the City of Seattle. The Green Kirkland Partnership has been creating strong community links to volunteers and businesses that help achieve the goals of this plan, which are to:

- Establish an oversight role for the Park Board
- Educate the community on the threat invasive plants have on urban forests
- Quantify the problem and resources necessary to reverse the decline of the natural areas and how to sustain healthy forests
- Identify and recommend best management practices

- Identify revenue sources to consider in funding the restoration work. Restoring 372 identified acres of restoration by 2028 will cost an estimated $5.2 million or $14,000 per acre
- Establish a volunteer stewardship program to sustain a volunteer work force to conduct ongoing restoration maintenance and care of our urban forests and other natural areas
- Acquire land that has ecological and habitat benefits
- Implement an Environmental Education and Outreach program to educate and engage the community in stewardship projects to remove invasive plants and to replant with native species, seek support from partners and businesses for funding and stewardship, and seek grants to support stewardship activities

Tree Management Review (2001)

This review was the first effort to understand how Kirkland's trees were being managed. A consultant made an in-depth examination into improving the City's urban forest. Key recommendations included the pursuit of Tree City USA designation and further support and guidance for the development of the Natural Resource Management Plan. Most of the goals outlined in this document have been achieved with the exception of these two actions:

- Determine goals and desired level of service to shift from reactive to proactive management of publicly owned trees.
- Expand public outreach and the education of residents, business owners, developers, staff, and public officials.

Although the 2001 Tree Management Review is over 10 years old and most of the action items have been accomplished, this document is still very relevant in its assessment of community awareness of trees and staff roles, responsibilities and knowledge. Interestingly, the staff responses when asked the questions: "In relation to trees and urban forest management, as you go about your daily job, what works and what doesn't work?" are very similar to the current staff responses.

In all, the City has developed many policies, documents and codes based on the vision and direction from the community to preserve and protect the urban forest. These include regulations that limit tree removal on private property and retention and planting requirements on development sites, supported by effective enforcement codes. The City has over a 15 year legacy of consistently placing a high value on natural features, especially trees. The timeline shown below illustrates the increased recognition and importance of urban forestry in Kirkland:

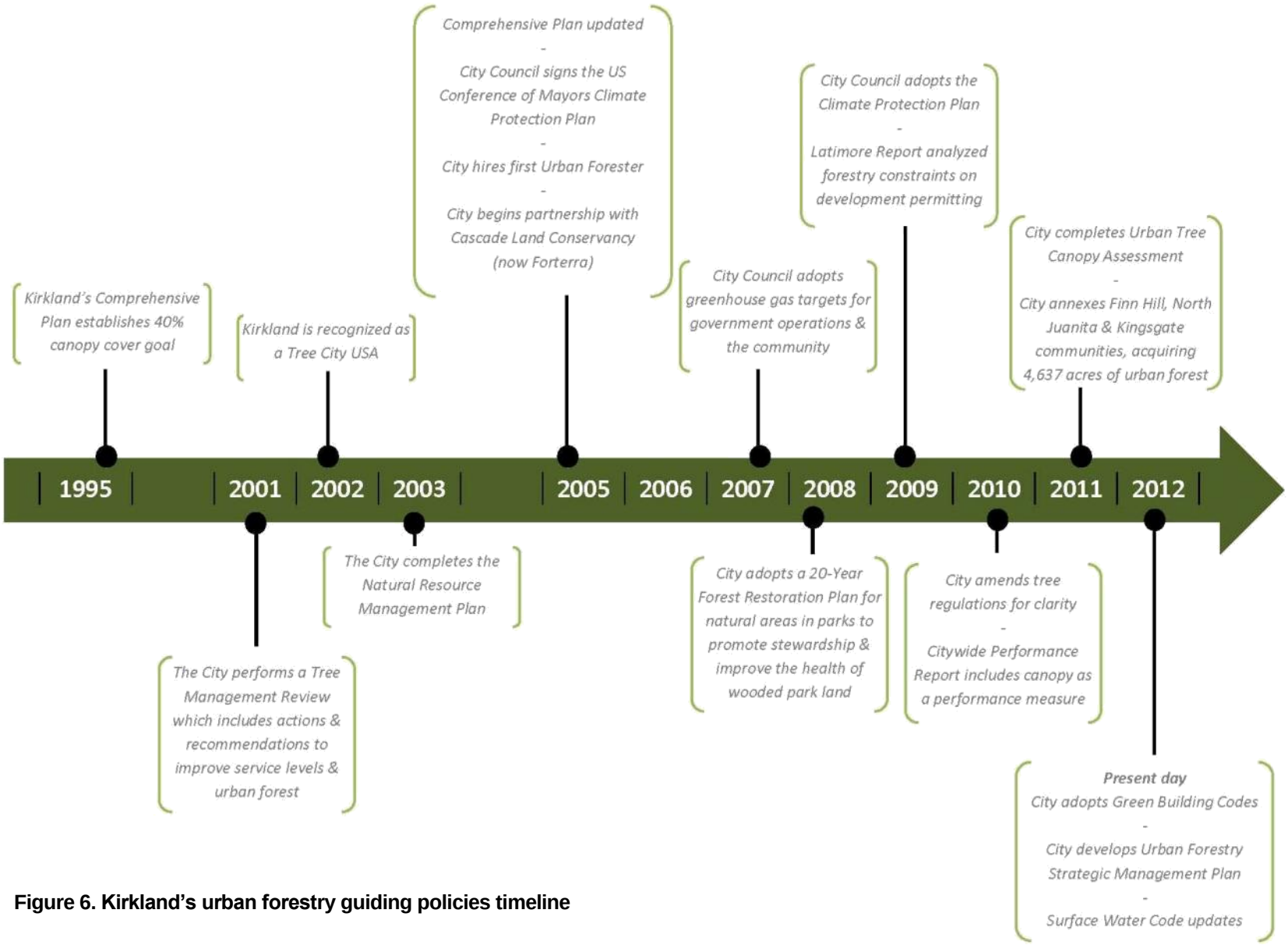


Figure 6. Kirkland's urban forestry guiding policies timeline

2.3 The Municipal Urban Forestry Program

This section describes the City's current forestry resources and operations: staffing levels, funding, procedures and protocols related to urban forest management. It explores City operations in comparison to best management practices and the urban forestry programs at other, similar municipalities. It maps out how the Planning, Parks, and Public Works departments interact with each other, with trees, and with the community on a routine basis.

The information in this section provides the context for the performance indicators described in Section 2.6. Reviewing the City's current practices will allow Kirkland to make decisions about future levels of service, program funding, code changes, or policies with respect to urban forestry and stay aligned with the long-term strategic goals of this plan. Section 4 provides specific goals and recommendations that are designed to improve efficiency in operations and manage the risks and liabilities associated with trees.

WHO IS INVOLVED IN URBAN FORESTRY?

Arborists are trained professionals concerned primarily with the management of individual trees. Commercial arborists provide tree care and management services on private and public property, utility arborists deal with tree management issues along utility – typically electrical corridors, and municipal arborists are those employed or contracted by municipalities to manage tree programs. Many arborists are also skilled in consulting and appraisals.

Foresters are trained to analyze and understand whole ecosystems of stands or large groups of trees on a systemic level. Traditional foresters are likely to be engaged with forestry as a researcher or scientist.

Community or *Urban Foresters* and *City* or *Municipal Arborists* generally have an overlap in the experience, training and skills of the previous two professionals and are those who oversee a municipal urban forestry program.

How these groups work together or relate to another is determined primarily by how a local government organizes its own departments and workforce, and how lines of responsibility are established. A city arborist may be placed within a public works department such as in Tacoma; or, to review development plans, an urban forester may be positioned within a planning department such as in Olympia and Kirkland. Some cities may have the oversight of a city-wide urban forestry program as in Renton and Vancouver while others may have urban forestry functions within individual departments such as Seattle or Mercer Island.

Other cities, such as Woodinville, have a *tree board or commission* that provides citizen oversight or guidance to the program.

Review of Existing Operations

Municipalities without formal forestry programs often have staff that work with tree issues in many departments. This is the case with Kirkland. Urban forestry issues at the City are being addressed by staff in the legal, building, planning, and public works and parks departments. To assess current staffing levels, over thirty (30) individuals were identified as persons who work with tree issues on at least an intermittent basis. Of those involved with forestry issues or operations on a more regular time basis, 12 individuals were identified with a quantifiable amount of time each week working with trees or tree related issues.

While the 12 individuals identified as sharing tree-related responsibilities are across three different departments, **city-wide, there is only one designated Full-Time Employee (FTE) position dedicated to urban forestry**. This position is solely responsible for public tree care in both Kirkland parks and in the right-of-way. Currently, there is no one full time position responsible for policy or program development, volunteer coordination, or permit review.

In order to assess the collective resources used to meet current levels of service, Kirkland's forestry-related operations were outlined and discussed with department managers and staff. This discussion resulted in quantifying the forestry-related tasks performed by staff and contractors on an hourly and weekly basis. In Tables 2 through 4, the time resources used to meet urban forestry levels of service are shown, split among the three departments that work with tree issues. The current levels of service shown in the tables below can then be compared to the positions designated for urban forest responsibilities in the Organizational Charts shown in Appendix D.

Overall, there is evidence of moderate to good interdepartmental cooperation; staff's ability to accomplish goals and communicate effectively across departmental lines is a source of pride. However, in other areas, the lack of communication causes problems and hampers goal achievement. These general observations about the cooperation among staff are very important when the City evaluates future staffing needs and levels of service.

Planning Department

Discussions with staff responsible for development review, processing permits and code enforcement were primarily focused on the effectiveness of the current City codes for protecting trees. Staff discussions noted that the code is generally working; however there are some areas that could be improved to be less confusing. Staff believes that the current code, although quite comprehensive, is sufficiently flexible for property owners to accommodate tree retention in their development plans with a variety of tree removal scenarios. There are concerns, however, that some permit applicants and developers do not share that sentiment.

As part of their normal duties, Assistant Planners respond to general tree code inquiries, process most tree removal requests and handle tree removal permits over the planning counter at the time they are received. As the complexity of development scenarios increases, typically the Urban Forester position has been responsible for development permit review, as well as citywide urban forestry policy and program development. Addressing this complexity in development proposals requires the technical knowledge of trees impacted by construction, experience with administering municipal code and balancing urban forest sustainability with city development.

The following issues describe the current challenges to both permitting and urban forest management efforts:

Current staffing levels - To meet staffing needs, the combined efforts of a contracted consulting arborist, planning staff, and a part-time Urban Forester help process the permit review and address work program projects. The temporary 0.5 FTE Urban Forester position is funded through the surface water utility fund and a 0.5 FTE Arborist position is contracted out from the General Fund. The Planning Department also has two code enforcement officers who respond to illegal tree activities for approximately 20 hours per week. The Planning Department's combined urban forest activities, including code enforcement were determined be 92.5 hours, or the equivalent to 2.3 FTEs.

Table 2. Planning and Community Development current level of urban forestry services

Planning and Community Development	Current Urban Forestry Levels of Service	Hours Spent per 40 hour week
Development Services	• Development plan review for compliance with tree code • Public information (online, phone and counter)	40
Permit Intake and Review	• Tree removal permit review • Public information (online, phone and counter)	12.5
Code Enforcement & Complaint Investigation	• Pursuing tree removal complaints	20
Comprehensive (Long-range) Planning	• High priority Work Program projects • Tree regulations & related policy • Federal, state grant procurement • Tree City USA applications	20
Neighborhood Planning and Updates	• No Urban Forestry Activity	0
Tree Preservation/Care Education and Outreach	• Web site Content and Public Education • Special projects	~
	Total Service Hours per Week: 92.5	

Funding - funding for permit and development review for a .5 FTE Urban Forester (currently unfilled) and for planner time reviewing tree removal permits comes from the General Fund. The other .5 FTE Urban Forester was converted to a temporary position in 2012 and is funded from Surface Water.

Permit application completeness and quality – The City has reoccurring issues with incomplete or poor quality permit applications, resulting in increased review times, additional review charges, and numerous revisions. The City has tried to address this issue with the Latimore study, pilot programs, and increased staffing.

Urban Forester position – While the City has an official urban forester position in the planning department, this is a temporary part-time position. Due to the limited time for this position, many planned activities for 2012 have been placed on hold, and priority efforts have been focused on maintaining Tree City USA status, grant administration and project management for special urban forestry-related projects in the department's Work Program for this position.

Arborist reports and tree risk assessments – When these reports are required from permit applicants, there are many cases in which the reports or inventories are inaccurate or too subjective. Problems associated with this include:

- Offsite trees or those located along property line not shown
- Grade changes not properly considered
- Utility conflicts with root zones or drip lines
- Symbols used in landscape drawing not representing true drip lines

Development and tree protection in Kirkland

Arboriculture technical support – For the past year, the Planning Department has contracted out its development review to meet budget constraints. This process may be resulting in additional hidden costs. Because the contractor is not always well-versed in city codes, it is sometimes necessary for a City planner to provide additional follow-up.

Code enforcement – Conversations with staff involved in code enforcement revealed that the most common explanation for tree-code infractions is that the property owner did not know what the code allowed or prohibited. However, code enforcement staff does communicate with tree care companies as a strategy to increase public awareness.

Permit fees – The City is adopting a new permit tracking software, which presents opportunities for more detailed evaluation and monitoring of tree related permits to ensure fees are appropriate

Coordination with Public Works and public tree permit review – Trees located in the right-of-way that require a permit review are assigned to the Public Works Department staff. This may be the only tree inspection for public trees that may be formally documented.

Parks Department

Interviews with City staff explored the Parks Department's approach to planting new trees, maintaining existing trees, and managing hazardous trees. Since the 20-Year Forest Restoration Plan has successfully addressed natural areas in Kirkland parks, discussions focused on the management of formally landscaped park areas, wetlands, and critical areas. Overall, care of individual trees has occurred according to urgency and budget availability. The following are summary comments from these discussions:

Current staffing levels - Parks and Community Services currently does not have designated positions dedicated to tree care in city parks. Funding for tree maintenance, removals or hazard

tree assessments is a discretionary budget item. Currently, 1.5 Full-Time Employee (FTE) positions are temporarily funded through 2012 to manage the Green Kirkland Partnership Program.

Table 3. Parks Department current level of urban forestry services

Parks Department	Current Urban Forestry Levels of Service	Hours Spent per 40 hour week
Maintenance Operations	• Tree planting and establishment • Structural pruning on smaller trees • Inspection and identification of hazardous trees in parks	40
Green Kirkland Partnership	• Tree Planting • Implementation of 20-Year Restoration Plan • Event and volunteer coordination	60
Contract Pruning		~
		Total Service Hours per Week: 100

Funding - staffing for tree maintenance and removal comes primarily from the General Fund. The City has continued to staff the Green Kirkland Partnership restoration and planting program (with Forterra and EarthCorps) through temporary funding of a 1.5 FTE for education and outreach. These positions are funded through a combination of Capital Improvement Program (REET) funding and grants from the King Conservation District. Funding for the staffing resources to support this effort at its current level is included in the parks levy. If the levy is not approved other funding (e.g. grants) would need to be pursued to continue staffing to support this program.

Tree inventory – The City has no inventory of trees in parks and no formal protocols for inspection. Without any summary data about park trees, the Parks Department is functioning reactively to tree issues as they emerge in parklands.

Tree planting – On an annual basis, Parks staff focus attention on areas where they know they have deficiencies in tree cover. They communicate with Kirkland's Environmental Education and Outreach Specialist and with local nurseries about tree planting needs and opportunities. With limited funding for establishment care (primarily watering), Parks staff focus on planting native trees and describe this as being an effective strategy to grow the forest in city parks.

Maintenance of small trees – Parks grounds maintenance staff perform simple structural pruning or mitigation of hazardous situations. This tree work is not performed by qualified arborists, but staff is aware of ANSI A300 pruning standards and an effort is made to perform correct tree care practices.

Maintenance of large trees – Parks sets aside $3,000 each year for maintenance or removal of large trees. It is widely accepted in the department that this is insufficient funding and typically only mitigates one or two hazardous trees a year. As tree issues emerge throughout a year, Parks staff will collaborate with the Public Works Grounds Division to secure their staff time and equipment resources. When urgent tree work is identified, priorities for Park staff change. They will divert additional funds from other park activities to contract additional necessary work from professional tree care companies.

Peter Kirk Park

20-Year Forest Restoration Plan – By the end of 2011, **38 acres** were actively being restored, and more than **9,000 volunteers** were engaged at more than **300 community events** to steward Kirkland's parks and open space. This volunteerism is valued at **$678,000**. Nearly **16,000 native plants** were planted by these volunteers, and those plants will continue to provide benefits to Kirkland as they grow, capturing carbon to clean the air, filtering water and slowing it down before it drains to Lake Washington, and providing healthy urban habitat for wildlife and making parks desirable places that are well-cared for by the community.

Forest restoration requires the removal of invasive trees and other harmful species. By the end of 2011, a total number of 1,554 invasive trees had been removed. Staff resources are needed to conduct activities not suitable for volunteers, such as removal of invasive trees and the application of chemicals to kill invasive trees and other species harming the urban forest.

For the first few years of plan implementation, the Green Kirkland Partnership exceeded benchmarks for volunteer hours, acres in restoration, and numbers of stewards, but fell below benchmarks for staff numbers. By the end of 2011 the only benchmark exceeded was number of stewards, which was double the benchmark (16 active stewards; benchmark of 8 stewards). All other measures and staffing levels are below benchmark levels due to lack of resources. Public interest and engagement remains high, but the City is not able to meet the demand.

Green Kirkland Partnership staffing at the 1.5 FTE level is currently funded through 2012. Without continued funding, the program will fall short of plan goals. Additionally, annexation in 2011 increased forested natural area acreage in city jurisdiction by approximately 31 acres, but these acres have not been surveyed in the same manner as acres surveyed for the City's 20-Year Forest Restoration Plan (2008). This acreage does not include natural areas in the new neighborhoods (including King County and Finn Hill Neighborhood Alliance-managed lands), Big Finn, O. O. Denny or Juanita Woodlands parks as they are currently not in the City's jurisdiction.

"I believe it is important to volunteer because it is our responsibility to create the kind of community we want to live in."

Jasmine G., Student

Public Works Department

The staff in the Public Works division discussed urban forestry from both the perspective of street tree (right-of-way) maintenance, stormwater mitigation strategies and capital improvements. Although Public Works uses a GIS-based inventory and work order software system for its grey infrastructure management (Hanson), it is not utilized with the management of public trees. Staff that is responsible for street tree maintenance uses the city-wide permit database to track and report permit activity such as public tree removal.

Currently, the Public Works Grounds Maintenance Division is responsible for managing trees in the public right-of-way. When time allows, the pruning, removal and maintenance of trees is performed by the Grounds Lead person and a Field Arborist. Aside from other grounds keeping tasks, their duties include the inspection, pruning, and removal of trees at their discretion in response to service requests from residents and businesses. In addition, they routinely cooperate with Parks Department staff to perform tree work on parks trees as time allows. The following findings were identified through discussions:

Current staffing levels – Public Works has 1 FTE solely dedicated to forestry operations and no dedicated urban forest budget. However, the grounds maintenance division tasks and surface water maintenance projects review determined that a staffing need equivalent to 2.65 FTE exists to address street tree maintenance and removal, hazard tree evaluations, clearing trees and vegetation blocking the right-of-way, reviewing tree permits, maintaining the existing street tree inventory and emergency storm response. The tree crew is shared by the Parks department as needed.

Table 4. Public Works current level of urban forestry services

Public Works Department	Current Urban Forestry Levels of Service	Hours Spent per 40 hour week
Street and Public Grounds Maintenance	• Pruning and removal of street trees • Service requests for field inspection of street trees • Street tree inventory updates	96
Surface Water	• Maintenance of vegetation in/around stormwater facilities	10
Contract Pruning		~
		Total Service Hours per Week: 106

Funding - Funding from Public Works comes from the General Fund and Surface Water Utility for the field arborist and grounds staff to perform tree removal, maintenance and pruning. When the City undertakes major capital improvements, trees are typically planted as part of the project. For example, street trees have been installed along Slater when that road was improved and will be included in the NE 85th Street project. During the upgrade to Juanita Beach, nearly 900 new evergreen and deciduous trees were planted many of them in the newly created habitat marsh area west of Juanita Creek.

Equipment – Public Works Division staff have access to an aging surplus aerial-lift truck (bucket truck) and climbing gear to perform tree work. Additionally, they have access to a mobile tablet computer with capabilities to update the existing street tree inventory in GIS.

Public Works crew pruning street tree

Safety training – Both staff arborists attend annual International Society of Arboriculture (ISA) training events to maintain professional qualifications and develop their skills. Any additional safety training as it relates to the practice of arboriculture is achieved through self-directed learning. This is undocumented safety training and presents a liability for meeting OSHA requirements.

Tree maintenance and grounds keeping – The amount of time the Ground Division describes as solely working with trees varies. Because staff spends time fulfilling other grounds keeping obligations, time spent working on trees is difficult to track. As a consequence, the majority of tree work is reactive, with little to no time to implement planned maintenance strategies. The crew anticipates staffing/maintenance needs to double due to the amount of trees in the annexed area.

Public tree pruning and removal – Public trees along street rights-of-way are the maintenance responsibility of the abutting property owner according to 95.21.1 (Kirkland Municipal Code) with the exception of trees located in the central business district (CBD), which are to be maintained by Public Works staff. Additionally, permits are required in the code for both public tree removal and pruning; fees are associated for tree removal only. However, City crews are responding to pruning and removal requests from Kirkland residents without the required permits or fee collection.

Tree inventory and inspection – Because the majority of street tree work is reactive, the Public Works staff does not perform planned cyclical inspections or updates to the tree inventory. According to the database, over 12,000 City trees have not been revisited since 2004 and no trees were updated in 2010 or 2011. With the recent annexation, the number of street trees may have doubled. These unknowns represent an increasing liability to the City, as it is not performing the due diligence necessary to maintain the safety of public rights-of-way.

GIS updates – The City's GIS-IT department is updating the GIS to include the location of street trees in the annexation areas. The tree locations will be catalogued but not assessed for age/size, rated for condition, or evaluated for hazard risk.

Tree planting – Public Works does not have a tree planting program or planting goals. Aside from the Green Kirkland Partnership efforts, no formal tree planting programs have been developed since the Centennial Tree Project in 2005. This project funded tree planting in parks and planting strips adjacent to rights-of-way to commemorate the 100th birthday of Kirkland. Consequently, crews plant trees occasionally. Exceptions include trees planted by the Surface Water division when conducting volunteer stewardship projects, those planted with capital improvement projects (updates or improvements to major transportation corridors), and frontage

improvements required with development. Public Works maintains a small database of trees they know will require follow-up establishment care, but no large scale projects are planned. Again, available staff time limits this proactive urban forestry activity.

Productivity tracking – The Public Works department does not maintain readily searchable records for productivity tracking with respect to tree work. Staff describe maintaining or removing approximately three (3) trees per week as a typical production rate, but were not able to able to demonstrate how these were in response to work orders or being tracked in any other electronic system like Hansen or the City's GIS.

Tree Care Industry Standards and Best Management Practices

The tree care industry has developed comprehensive standards for maintenance and care, safety, and certification. Compliance with these standards can decrease exposure to risk, increase consistency of maintenance, reduce injuries to workers and the public, and increase the health of the urban forest.

Tree Care Standards – Universally-recognized industry standards provide guidance for tree care operations, including detailed criteria for maintenance activities and safe work practices. The core of the tree care standards is the ANSI A300 Series, developed by the American National Standards Institute (ANSI). These standards have been rigorously vetted by professional tree care practitioners and are based on the latest scientific research. The ANSI A300 Series unify and take authoritative precedence over all previously existing tree care industry standards. The standards are reviewed and revised periodically by a committee of industry experts and are accepted by most cities as the most basic expectation of quality. The standards cover all tree care operations, including:

ANSI A300 Pruning Standard - Part 1 (2008 or most current)

ANSI A300 Fertilization Standard - Part 2 (2011 or most current)

ANSI A300 Support Systems Standard - Part 3 (2006 or most current)

ANSI A300 Lightning Standard - Part 4 (2008 or most current)

ANSI A300 Construction Management Standard - Part 5 (2012 or most current)

ANSI A300 Transplanting Standard - Part 6 (2012 or most current)

ANSI A300 Integrated Vegetation Management - Part 7 (2005 or most current)

ANSI A300 Tree Risk Assessment Standard a. Tree Structure Assessment - Part 9 (2011 or most current)

Best Management Practices - The International Society of Arboriculture (ISA) publishes the Best Management Practices (BMP) Series as companion booklets to the ANSI A300 Series. These BMPs are written as explanatory guides for applying ANSI A300 standards in daily tree care practice and include:

Tree Pruning (2008 or most current)

Tree and Shrub Fertilization (2007 or most current)

Tree Support Systems; Cabling, Bracing, Guying, and Propping (2007 or most current)

Managing Trees During Site Planning & Construction (2012 or most current)

Tree Planting (2005 or most current)

Integrated Vegetation Management (2007 or most current)

Tree Risk Assessment (2011 or most current)

Integrated Pest Management (2007 or most current)

Tree Inventories (2006 or most current)

Utility Pruning of Trees (2004 or most current)

Safety Standards – In addition to tree care standards, ANSI provides the most current safety standards in the United States for arborists and other workers engaged in arboricultural operations in the **ANSI Z133 Safety Standard (2012 or most current).**

The Occupational Safety and Health Administration (OSHA) is very specific about the personal protective equipment (PPE) that tree workers should wear and requires employers to furnish appropriate equipment. The requirements for workers' PPE and training depend on their specific role in tree care operations. Requirements for safety glasses, hearing protection, head protection, protective clothing, and face masks are described in sections 1910.132, 190.133, 1910.135 1910.95 of the Occupational Safety and Health Administration Standards. OSHA also requires reporting of workplace injuries and imposes fines on employers that are found to be allowing unsafe work environments or practices.

Arborists' Certifications – In addition to publishing industry BMPs, the ISA is the organization responsible for testing and certification of tree care professionals. ISA-certified Arborists and Certified Tree Workers are individuals who have demonstrated a level of knowledge in tree care through experience and by passing a comprehensive examination developed by international tree care experts. Certified arborists must continue their education to maintain their certification and agree to adhere to a code of ethics.

Although currently offered only through ISA's Pacific Northwest Chapter, the Tree Risk Assessor Course and Exam (TRACE) will be a certification sanctioned by ISA in the near future. It is the standard for assessing hazardous trees and has become a required credential for arborists in Kirkland for tree risk evaluation.

Review of Kirkland's tree care operations revealed that while contractors engaged in pruning public trees must adhere to ANSI standards, no such requirement exists for internal staff. A Tree Protection Standard for protecting existing trees (public and private) during construction has been developed by Public Works. However, this standard does not reference the ANSI A300 series or its criteria. In addition, City staff was unable to readily produce documentation that demonstrates all City employees and contractors working with trees had been trained on Occupational Safety and Health Administration (OSHA) standards.

Emergency Preparedness – As with other City infrastructure, trees are subject to events which can result in emergency situations. Fire, storm events, insect, or disease outbreaks can cause significant damage to the urban forest. The dramatic loss of American and European Elms from Dutch Elm disease in the eastern United States is one example of the catastrophic effect pests can have on the urban forest. Debris from trees can also be the cause of emergency situations. Leaves, limbs or whole tree failure can fall on property or block the right-of-way, clog storm

drains, increasing the risk of flooding, damage utility infrastructure, or block transportation corridors.

The City of Kirkland has adopted the 2010 Comprehensive Emergency Management Plan, which establishes structure for an organized and effective response to multi-agency emergencies and disasters that may occur within the City. The plan does not explicitly address trees and the urban forest, but effectively considers them as part of debris management. The Public Works department has an operational plan to coordinate debris removal.

With respect to emergency preparedness and risk management specific to the urban forest, the City has a partial tree inventory, but does not have a routine tree inspection process. Hazardous trees are identified and managed through service ticket calls to the public works department.

Urban Forestry Program Funding

Municipal budgets can be quite complex, as researching Kirkland's urban forestry budget has shown. Without a centralized urban forestry program or department divisions, there is no itemized accounting that could be described as an urban forest budget in Kirkland. The beginning of this section describes the current staff and program funding for each department. In Section 4.6, potential program funding strategies are identified.

A variety of funding sources are utilized including the **General Fund** (Parks, Public Works and Planning), **Surface Water Utility,** (Public Works and Planning**) REET funding** (Parks), **grants** (Parks) and the **Capital Improvement Program** (Public Works and Parks). Planning and caring for Kirkland's urban forest is a discretionary item in the General Fund for those activities that utilize this fund. It is not typically delineated in departmental budgets so it is difficult to determine the actual total expenditures for urban forestry programs and whether or not operations are cost-effective and efficient when tracking is not definitive.

Tree care, maintenance, removal and pruning are conducted by grounds crews in the Parks Department (parks and open space) and the Public Works Department (street trees, CBD and city facilities). Division managers balance tree maintenance activities against other operating expenses and needs. Annexation has resulted in additional demand. Even prior to annexation, maintenance and pruning operations were based on reactionary management decisions rather than a prospective or planned approach to tree care.

As part of a major capital improvement project (CIP) such as street or park improvements, trees are typically included in the project budget, however long-term care, maintenance and survey assessment are generally not tracked or put on a maintenance schedule. CIP projects are funded on a project-by-project basis but not necessarily aimed at achieving overarching urban forestry and community goals. During the upgrade to Juanita Beach, for example, nearly 900 new evergreen and deciduous trees were planted many of them in the newly created habitat marsh area west of Juanita Creek.

Permit fees collected for development review and tree removals are not tracked and reported independently as revenue income for an urban forestry program staff. It is difficult to control costs without clearly identified forestry revenues or planned expenses.

The City has recognized the value of trees in reducing storm water runoff by allocating funds from the **Surface Water Management budget** to fill temporary funding for the 0.5 FTE Urban Forester position through the end of 2012.

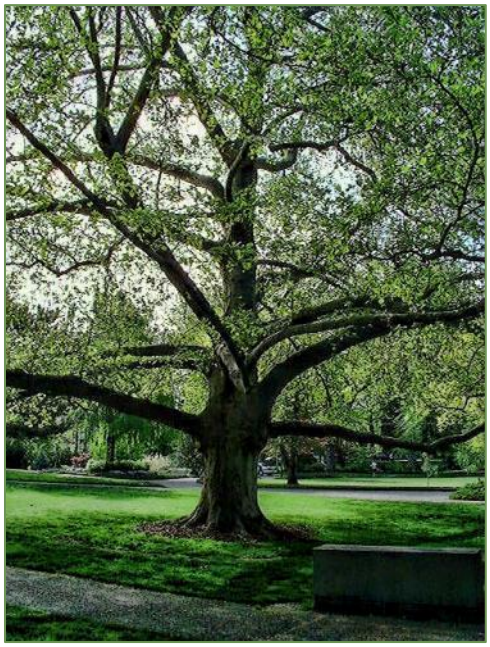
Kirkland has established a **City Forestry Account**, which receives funds according to Kirkland Zoning Code Chapter 95.57, primarily from code enforcement fines and fees paid in lieu of tree planting. The amount currently in this account is approximately $$38,000. This account is intended to fund a variety of urban forestry related projects including:

- Acquiring, maintaining, and preserving wooded areas
- Planting and maintaining trees
- Establishing a public tree holding nursery
- Providing urban forestry education
- Implementing a tree canopy monitoring program
- Other purposes relating to trees as determined by the City Council

As part of the overall strategic plan it is important to connect the 20 year strategy time frame to budget planning and funding levels. This timeframe enables short and medium-term financial and organizational planning and to establish funding, staffing and program priorities while maintaining an overall strategic direction that provides continuity. The direction should be towards the community's vision for its urban forest..

2.4 Municipal Forestry Program Comparison

A limited comparison of area municipal forestry programs was included as part of this plan. The cities identified in this section have adopted policies and programs to help meet their own urban forestry goals. Most have completed various tree inventories and performed tree canopy studies; many have drafted management plans and developed tree protection ordinances. The areas in which these cities differ are in how much they spend on urban forestry, how they are organized and how they staff their programs.



Large London Plane tree

Information on funding levels for urban forestry programs is difficult to obtain. Different cities have different sets of resources, therefore, budget numbers may not tell the entire story about the total resources being managed and maintained. Many municipalities have isolated programs that are not viewed under an overall urban forest program. Even so, to start somewhere, municipal forestry budget amounts as submitted to the National Arbor Day Foundation were utilized as a basis for comparison.

In order to be awarded Tree City USA status, cities must report their spending on urban forestry program elements to The Foundation. The standards for reporting are identical: *all expenses related to tree planting, maintenance, removal and management are to be included, even*

volunteer hours are accounted for at a standardized hourly rate. However, many cities – especially those that have multiple departments responsible for various program elements - may not report as comprehensively as others all aspects of their urban forest budget. For example, the City of Bellevue submits the budget amounts from their Natural Resource Division operating budget and capital budget. These numbers do not include any of the tree work in developed parks, right-of-way vegetation management by the Street Maintenance staff or any of the Transportation Department capital projects where they plant new trees and landscaping.

This data is not prescriptive as to what would be the most appropriate spending level for Kirkland. However, as different as these programs may be, it does provide a starting point for determining what might be reasonable for program funding in Kirkland.

Table 5. 2011 funding levels for local urban forestry programs

City	Annual Spending	Total Population	Spending per Capita
Bellevue	$4,475,153.00	123,400	$36.27
Lake Forest Park	$347,662.55	12,598	$27.60
Olympia	$569,409.85	46,478	$12.25
Portland, OR	$5,440,112.69	550,560	$9.88
Redmond	$524,645.10	54,144	$9.69
Renton	$794,192.00	92,590	$8.58
Kirkland	**$553,906.55**	**80,738**	**$6.86**
Vancouver	$982,991.10	162,300	$6.06
Woodinville	$68,822.60	11,350	$6.06
Seattle	$3,336,175.00	608,660	$5.48

Source: National Arbor Day Foundation

In 2011, the City of Kirkland reported a forestry budget to the National Arbor Day Foundation of $553,907. With the recent annexation (and population increase), this equates to a normalized $6.86 in per capita spending. This is lower than other municipalities in the region of varying sizes and urban forestry programs (Table 5). It should be noted that these numbers include volunteer time at a rate of $15 per hour. Due to the level of community involvement in the Green Kirkland Partnership program, volunteer time typically accounts for about half of Kirkland's annual urban forestry expenses for tree planting, removals and maintenance, including contractor costs.

In an effort to develop appropriate urban forestry budgets, cities like Mercer Island and Seattle have opted to designate distinct forestry elements within key departments. This creates some stability to program funding and has allowed these departments to approach funding from multiple perspectives to meet their specific objectives and overall urban forestry goals. On the flip side of this type of organizational structure, individual departments may suffer budget cutbacks or constraints, resulting in certain aspects of the program to suffer city-wide as a result. One challenge for cities with multiple forestry divisions is communication: both internally between departments and clearly communicating to the public who is responsible for what.

In other cities such as Bellevue, Renton or Vancouver, Washington, an urban forestry division is positioned within one department with oversight or close collaboration with other departments' urban forestry functions. Vancouver's Urban Forestry Division is made possible through a partnership between the City's Public Works Department and the Vancouver-Clark Parks and Recreation Department.

As in Kirkland, it can be difficult to gauge a program's organization and staffing levels in communities that do not have central forestry divisions. For comparative purposes, Table 6 shows the program lead or management positions for urban forestry divisions in each municipality.

Table 6. Urban Forestry Statistics in select Washington cities (updated 2012)

Municipality	Population (rank in state)	Area (mi^2)	UTC % (year)	Tree Regs?	UF Mgmt. Plan	Tree Board? (#)	UF Program Lead Positions (Dept)
Seattle	608,660 (1)	142.5	23% (2007)	Yes	Yes (2007)	Yes (9)	8-(Parks, SDOT, Seattle Public Utilities)
Tacoma	198,397 (3)	62.6	19% (2009)	Yes	Yes	Yes	3-(Metro Parks, City and Electric Utilities)
Vancouver, WA	162,300 (4)	46	19.7% (2002)	Yes	Yes	Yes	3-(Public Works)
Bellevue	122,400 (5)	34	36% (2007)	Yes	No	Yes	4-(Parks and 1 in Development Services)
Renton	92,590 (9)	22.3	28.6% (2010)	Yes	Yes	Yes	1-(Parks)
Kirkland	80,738 (13)	18	40% (2010)	Yes	No	No	.5-(Planning)
Redmond	54,144 (19)	16.6	No Canopy Data	Yes	No	Arborist	3-(Parks)
Olympia	46,478 (17)	19	Tentative Data	Yes	No	No	.5-(Planning)
Bothell (unconfirmed data)	33,505 (30)	12	No canopy Data	Yes	No	Yes (7)	1-(GIS department)
Mercer Island	22,699 (42)	13	41% (2007)	Yes	Yes	Yes	2.5-(Parks, Public Works, Development Services)
Kenmore	20,460 (45)	6.3	No canopy data avail	No	No	No	1-(Planning)

Municipality	Population (rank in state)	Area (mi^2)	UTC % (year)	Tree Regs?	UF Mgmt. Plan	Tree Board? (#)	UF Program Lead Positions (Dept)
Lake Forest Park	12,598 (66)	3.6	43% (2004)	Yes	Yes	Yes (9)	1-(Planning)
Woodinville	10,938 (72)	5.7	~34% (2007)	Yes	Yes (1998)	Yes (5)	1-(Development Services)

2.5 Community Involvement

A review of the Municipal Urban Forest Program includes looking at groups and individuals that are advocates and supporters of the urban forest who are focused on making tangible progress in sustainability measures. Typically, these groups are outside of the organization and include business groups, non-profit organizations, or agencies. The opportunity to combine efforts or provide mutual support through collaboration and partnership is extremely valuable to government operations; these groups are stakeholders that can make significant contributions to the strategies and goals essential to the plan's success. They are key partners to promote the urban forest agenda.

The Green Team

The **Green Team**, a City service team (committee), serves to increase interdepartmental communication of environmental issues and improve the City's efforts in sustainable issues, sometimes externally with partners and the community. Most City departments are represented on the committee. The Green Team has served as the City's ad hoc Tree Board to meet Tree City USA criteria, although typical meeting agendas do not focus on forestry issues.

The Green Kirkland Partnership

Since 2005, the Green Kirkland Partnership has built a program that engages the Kirkland community in urban forest restoration. The partnership is an alliance between the City of Kirkland, nonprofit partners, businesses, and the community to restore natural areas in City parks. Organizations that provide resources in support of the Green Kirkland Partnership include:

Forterra
King Conservation District
EarthCorps
Washington Native Plant Society
UW Restoration Ecology Network
National Wildlife Federation
Kirkland Neighborhoods
Kirkland Community Wildlife Habitat Team
Kirkland Kiwanis Sunrisers Club
Eastside Preparatory School
Denny Creek Neighborhood Alliance

This approach to community forest management has been adopted by at least six cities in the Puget Sound region, and has become the most successful urban reforestation program in the state. These six cities (Seattle, Kirkland, Tacoma, Redmond, Kent, and Everett) make up the Green Cities Partnership with Forterra, and have begun to network with each other to share ideas and strategies. Green Cities recognize that green infrastructure and grey infrastructure both need sustainable funding.

One of the main differences between Kirkland and the other Green Cities is that Kirkland currently relies heavily on volunteers for forest restoration. In the other Green Cities, most acres in restoration result from paid crew efforts and volunteers make up a smaller portion of the

restoration work. This heavy reliance on volunteers limits the extent and effectiveness of Kirkland's reforestation efforts.

Tree City USA

The Tree City USA designation shows a community's commitment to protecting its urban forest resource by meeting criteria established by the National Arbor Day Foundation. The four criteria that communities must meet annually to maintain Tree City USA status are:

- A community forestry program with an annual budget of at least $2 per capita
- A tree care ordinance
- An Arbor Day Observance and Proclamation
- A Tree Board or Department

The City of Kirkland has shown a commitment to responsible urban forest management by celebrating its tenth consecutive Arbor Day in 2011, maintaining its status as a Tree City USA. By going beyond the requirements for Tree City USA status, Kirkland has received two Growth Awards from the National Arbor Day Foundation. Aside from the recognition and community pride in this designation, maintaining Tree City USA status enables cities to be competitive for grant funding. Without this support, Kirkland could not have conducted its 2011 canopy assessment and this strategic management plan. Unfortunately, the increase in population with the recent annexation resulted in a decrease in the per capita spending required for Tree City USA designation in 2011. This means that, without planning its urban forestry budget, Kirkland will have difficulty maintaining its Tree City USA designation in the future.

The City of Kirkland Website

The City has a web page dedicated to urban forestry interests and issues. It is updated as needed, such as with policy changes or with the completion of a special project. Visitors to the City Web site must navigate from the home page to the 'Community Link' and then to the 'Kirkland Green' link to access the page. Although this page provides a detailed starting point to accessing questions about all trees, visitors to the Kirkland Web site must know to navigate through the Planning Department to learn about trees and tree related policies. This could be a very useful informational resource if adequately maintained and updated on a regular basis.

Community Resources/Stakeholders

(Placeholder from Phase II Public Outreach)

To summarize Sections 2.1 through 2.5, a review of current practices has been completed of Kirkland's urban forestry program, which examines these elements:

- Existing operations in the Planning, Parks and Public Works Departments

- Current funding
- Comparisons to other municipal urban forestry programs
- Community involvement

In Section 2.6, an assessment of Kirkland's performance can be made using the information gathered from the review and from researching applicable codes, documents and policy. The next section outlines 21 criteria for urban forest performance and provides indicators from low to optimal performance for each.

2.6 Kirkland's Urban Forest Performance

As detailed in the Plan Overview & Methodology, the information obtained from reviewing the four focus areas was compiled to assess progress towards and identify the challenges to better urban forest management:

- **The Urban Forest Asset**
- **Guiding Policies and Regulatory Framework**
- **Municipal Urban Forestry Program**
- **Community Involvement**

Using the criteria established in "A Model of Urban Forest Sustainability" (Clark, et al, 1997) shown in Appendix A and the guidelines from "A Framework for Strategic Urban Forest Management Planning and Monitoring" (Kenney, et al, 2011), a gap analysis was generated. Together with the City staff interviews and research into City codes and procedures, the analysis shows how Kirkland's urban forest performance rates in individual program components and then, at the end of this section, overall.

Each of the performance measure criteria are assessed with a rating from low to optimal performance. A description of the current status for each performance measure follows, along with a summary of the risks of inaction and the benefits of increased performance. There are three performance indicators of urban forest health in which the City, without a complete tree inventory, has no data to accurately perform an assessment. This is an example of how many of the criteria items identified in this analysis are co-dependent with the others for achieving improved performance.

Criteria:	**Measure Canopy Coverage**
Justification	Assess tree canopy cover citywide and within specific areas using a consistent measurement strategy at even intervals.
Performance	Good
Current Status	In 2011, the City used high resolution imagery to compare tree anopy data from 2002 to 2010, but has not fully integrated this information into the City GIS system. When integrated, this information can be applied at several levels (watershed, neighborhood, zoning type, by parcel, etc.) to further assist with other City goals/protocols. No subsequent canopy studies are funded or planned.

Risk	Reduced capability to monitor canopy as a performance measure and community goal. Limits interdepartmental effectiveness if canopy data is not available in city-wide GIS system.
Benefit	Provide an overall measure of program success and. Clearly identify targeted opportunities for improvement. With integration into GIS: optimize city-wide coordination, improve internal efficiency, improve public & development services, position for regional collaboration

Criteria: Existing Canopy Cover Status

Justification	Performance measure towards the City's 40% canopy goal. Gauge of balanced growth, development and natural resource protection.
Performance	Optimal
Current Status	The existing canopy cover equals 75%-100% of the potential. Following the 2011 annexation, Kirkland's canopy coverage was 40.7%; consequently the City has met its 40% canopy goal. The City is positioned to continue efforts to maintain its canopy coverage and possibly shift towards identifying the quality, condition, age, and diversity of its canopy coverage to achieve optimal canopy cover health and succession.
Risk	Disparities in tree coverage between zoning classes, land use, watersheds or business districts. Low % of urban tree canopy coverage causes increased flooding, urban heat island effects, energy use; reduces air quality and degrades asphalt road surfaces. Canopy reductions also negatively impact wildlife travel corridors and decrease habitat.
Benefit	Canopy cover can help optimize the ecosystem services provided by the urban forest. Continued efforts towards developing strategies for increasing canopy and target specific areas for enhanced benefits.

Criteria: Public Tree Inventory

Justification	Infrastructure asset inventory
Performance	Low to Moderate
Current Status	Sample-based inventory of public trees: the original 2004 street tree inventory has not been comprehensively updated and only includes the location of trees in the annexation area. There is no inventory of public trees in formally-landscaped parks. Without a complete public tree inventory, the City does not have enough information to assess the current level of performance or manage the following three criteria: urban forest age, species suitability and diversity (see below).

Risk	Difficult for City to proactively manage its public trees, efficiently track operations and monitor public service levels. Without condition and value of trees it's difficult to resolve accident claims and reimbursements for damage caused by extreme weather events or other disasters. Without data on all public owned trees, planning and prioritization of urban forestry activities is based on conjecture and anecdotal evidence.
Benefit	Managers can develop work programs appropriately and justify funding needs. City can quantify assets, risks, and liabilities. Lowered public tree maintenance costs. Plan proactive tree management strategies and distribute workloads efficiently.

Criteria: Urban Forest Age

Justification	Provide for an uneven age distribution of trees throughout the City and at a neighborhood level (approximate age determined by DBH) for long-term succession.
Performance	Not enough information to determine. 'Low' is any relative DBH class represents more than 75% for the tree population. 'Optimal' is 25% of the tree population is distributed amongst each of four relative DBH classes.
Current Status	Unknown (Need complete public tree inventory).
Risk	Substantial maintenance costs and expensive end-of-life tree removals may be necessary in even-aged populations that reach the end of their useful life simultaneously. Tree failure from disease, extreme weather events, and pests can be catastrophic in even-aged tree populations. Neighborhoods and business districts can become devoid of canopy.
Benefit	Age distribution facilitates long-term budget forecasting. Annual costs for care of public trees can be more evenly distributed over many years. A varied age-class distribution is important for a succession of environmental benefits and results in a healthier, more resilient and sustainable urban forest.

Criteria: Species Suitability

Justification	Establish a tree population suitable to the urban environment and adapted to the regional environment.
Performance	Not enough information to determine. 'Low is less than 50% of trees are of species considered suitable for the area. 'Optimal' is all trees are species considered suitable for the area.

Current Status	Unknown (Need complete public tree inventory).
Risk	Unsuitable species require substantial maintenance and must be replaced more frequently.
Benefit	Poor performing tree species do not continue to be planted, reducing tree maintenance and removal costs.

Criteria: Species Diversity

Justification	Establish a genetically diverse tree population citywide as well as at the neighborhood level.
Performance	Not enough information to determine. 'Low' is fewer than 5 species of trees dominate the entire tree population. 'Optimal' is no species represents more than 10% of the entire tree population at the neighborhood level. Exceptions are made for native species in naturalized areas.
Current Status	Unknown (Need complete public tree inventory).
Risk	Predominance of a few species can lead to substantial impacts from weather events that damage certain species and to limit the risk of catastrophic loss from species-specific pests or disease. The dramatic impact of Dutch Elm disease and Emerald Ash borer on urban forests are prime examples of why cities diversify tree species. The risk of ignoring species diversification can be costly for municipalities.
Benefit	Healthier, more resilient and sustainable urban forest.

Criteria: Condition of Public Trees

Justification	Establish a detailed understanding of the condition and risk potential of all public trees.
Performance	Low
Current Status	Request-based, reactive system. The condition of public trees is largely unknown; City trees in the right-of-way or in parks do not typically receive routine planned inspections.
Risk	Lack of proactive hazard tree evaluations can compromise public safety and increase risk of municipal liability.
Benefit	Successfully tree maintenance budgeting. Increased public safety. Reduced liability associated with tree failure.

Criteria:	**Extensively Managed Public Natural Areas**
Justification	Detailed understanding of the ecological structure and function of all public natural areas.
Performance	Good
Current Status	In 2008, the City adopted a 20-Year Forest Restoration Plan for its forested open spaces located in parks, including some road and trail rights-of-way. The Forest Restoration Plan outlines the structure & function of forested park land, however, it does not include the extensive acreage of natural areas in the annexation areas, nor is the ecological structure and function of all publicly-owned natural areas documented in the citywide GIS system.
Risk	If services are not tracked, the value of the asset is unknown and preservation and maintenance is more difficult to rationalize.
Benefit	Healthier, more resilient and sustainable natural areas. Urban forestry projects will be easier to identify, finance and secure when cost-benefit relationships can be established.

Criteria:	**Native Vegetation**
Justification	The preservation and enhancement of local natural biodiversity
Performance	Good; the use of native vegetation is encouraged on a project-appropriate basis in both intensively and extensively managed areas; invasive species are recognized and their use discouraged.
Current Status	This criterion is well managed through the adoption of the aforementioned Forest Restoration Plan, which identifies the composition value of native stands and recognizes the dangers of invasive species.
Risk	Reductions in native species decrease preferred habitat for fauna. Example: Declining native range of Pacific madrone.
Benefit	Provides resiliency in the urban forest. Native vegetation often requires less maintenance and optimizes ecosystem health.

Criteria:	**City-wide Urban Forestry Management Plan**
Justification	Ensures the sustainability of Kirkland's urban forest in order to optimize the ecosystem services provided by trees city-wide.
Performance	Low, shifting to good or optimal pending acceptance.
Current Status	Currently there is no citywide Urban Forest Strategic Management Plan. The optimal performance indicator for urban forest management

	plans is a strategic multi-tiered plan for public and private intensively and extensively managed forest resources that has been formally recognized and implemented with adaptive management mechanisms.
Risk	Uncontrolled costs associated with tree maintenance and removal, Plan becomes unused and obsolete, inefficient and ineffective public service, increased liability associated with tree failure.
Benefit	Creates pathways to stable and predictable funding. Has flexibility to adapt to new information as a result of monitoring outcomes or changes in best management practices based on best currently available research. With periodic reviews and updates, Plan maintains relevance to the community and City staff.

Criteria: Stable Municipality-wide Funding

Justification	Achieve overarching goals and individual objectives in the Plan.
Performance	Low to moderate. 'Optimal' performance for municipal-wide program funding is with adequate private and public funding to sustain maximum urban forest benefits.
Current Status	A variety of funding sources are used including the General Fund, Surface Water Utility, grants and capital improvement program.
Risk	Objectives will not be attained if staff and funding resources are not available.
Benefit	Controlled costs, as funds are allocated to urban forestry programs strategically.

Criteria: Urban Forestry Staffing

Justification	Employ and train adequate staff to implement citywide urban forest management plan.
Performance	Moderate to Good
Current Status	Certified arborists and professional foresters on staff; however regular professional development is inconsistent. The City does not have a formalized forestry unit to ensure adequate staffing for implementation of Plan elements. City-wide, only one staff member is a permanent dedicated full-time forestry position. Permitting, code enforcement and development review staff also attend to urban forestry issues but are not formally trained in arboriculture or urban forest management. Ideally, certified arborists and professional foresters within a multi-departmental team that comprise an urban forestry unit provide leadership to implement this Plan.

Risk	Staff may not be aware of most recent best management practices and industry standards. Tree risk assessments made by untrained staff may be exposing the City to a greater liability associated with tree failure.
Benefit	Staff can effectively manage urban forest risks and control costs using the best available science and practices.

Criteria: Trees Planting & Establishment

Justification	Urban forest renewal is ensured through a comprehensive tree establishment program driven by canopy cover status, species diversity, and species distribution objectives.
Performance	Low to Moderate
Current Status	Current tree planting in the City is ad hoc, with the only formal directive for new tree establishment coming from City development code requirements and land use regulations. The City has benefited from substantive planting efforts through the Green Kirkland Partnership and in major park projects (e.g. Juanita Beach Park). An 'optimal' tree planting & establishment program is directed by a planting and directed by needs derived from a tree inventory and is sufficient to meet canopy cover objectives.
Risk	The number of trees in the City will decline without active replanting. To combat typical tree mortality, the City must engage in annual tree planting. Without data to quantify the tree mortality rate, the number of trees that should be planted annually cannot be determined.
Benefit	This will guide the value of the ecosystem services provided by the urban forest and control costs by proactively directing the future state of the urban forest.

Criteria: Tree Location/Habitat

Justification	Public trees planted in appropriate locations or habitats that will maximize current and future benefits of the site.
Performance	Moderate
Current Status	Tree species are considered in planting locations through planting guidelines that are routinely updated. The City can set policies on species selection and planting strategies that are aligned with other plan goals. Although tree species are considered through existing City codes and policies, there are no community-wide guidelines for the improvement of planting sites and the selection of suitable species. Optimally, all trees are planted in sites with adequate soil quality and quantity, and growing space to achieve their potential.

Risk	Improperly planted trees and unsuitable species increase future workloads.
Benefit	This will control costs for urban forest management. This performance measure is important to help to ensure that trees maximize current and future benefits.

Criteria: Interdepartmental Cooperation

Justification	Ensure all City departments cooperate with common goals and objectives.
Performance	Moderate
Current Status	Kirkland does not have a centralized urban forest program, nor are there designated urban forest divisions within multiple departments. There are some common goals but also differences and sometimes little cooperation between departments. This approach has been effective so far due to the level of communication and sharing of institutional knowledge by individuals. The City forms informal interdepartmental teams that function to implement these goals on a project-specific basis. Cities with well-developed urban forestry programs ensure all departments are cooperating with common goals and objectives by establishing a formal interdepartmental team providing leadership across all urban forestry projects.
Rationale	Team meetings ensure that plan objectives are routinely referenced and plan obstacles can be addressed through collaborative problem solving ensuring that all City departments cooperate with common goals and objectives.
Risk	Miscommunications with the public or misalignment of priorities of objectives may occur. Isolation from decisions and collaboration can result in limited plan effectiveness.
Benefit	The team will improve operating efficiency on urban forestry projects. Improved levels of public service.

Criteria: Green Industry Cooperation

Justification	City and contractors operate with high professional standards and commit to city-wide goals and objectives.
Performance	Low to moderate
Current Status	No adherence to industry standards in many commercial landscapes; general cooperation among nurseries and tree care companies, no vegetation management plans with city's utility providers, issues with

development plans/arborist reports not meeting professional standards or City requirements.

Risk Failure to engage with green businesses can result in damage to public trees and canopy loss.

Benefit Establishing partnerships with green industry businesses encourages alignment with City urban forestry objectives and lowers costs associated with urban forest management through voluntary cooperation. Helps to ensure the green industry operates with high professional standards and commits to citywide goals and objectives. Sets a positive example and creates advocates of proper tree care. Kirkland has an opportunity to partner with its two utility providers, Seattle City Light and Puget Sound Energy to draft vegetation management plans for the pruning and restoration of trees within overhead utility jurisdiction.

Criteria: Neighborhood Action

Justification At the neighborhood level, citizens understand and cooperate in urban forest management.

Performance Moderate to Good

Current Status City-wide coverage and regular interaction of Green Kirkland Partnership; otherwise isolated or limited number of active groups. With the recent annexation, all neighborhoods may not be unified in their understanding of the urban forest management objectives of the City. The Finn Hill Neighborhood Alliance (formerly Denny Creek Neighborhood Alliance) is a strong example of neighborhood leadership. Since 1996, this non-profit group serves to "preserve, protect, and restore the natural resources of the area and promote stewardship of wildlife and the environment," has led efforts to restore Denny Creek, help draft a King County ordinance protecting mature trees and native vegetation, raised funds to help purchase Juanita Woodlands, a 40 acre parcel of land and produced a detailed study of watershed issues (Finn Hill Neighborhood Alliance, 2012).

Risk Failure to engage with neighborhoods can lead to misunderstandings and citizen distrust of City staff and policies.

Benefit Neighborhood stewardship can be one of the most cost-effective methods for creating a sustainable urban forest and foster volunteerism in the community, which lowers costs associated with urban forest management through voluntary cooperation.

Criteria:	**Citizen-Municipality Interaction**
Justification	*All constituencies in the community interact for the benefit of the urban forest*
Performance	Moderate
Current Status	Currently, little to no interaction amongst constituencies. On a project-by-project basis, the community may interact with informal or general cooperation. As an example, the Central Business district trees are maintained by the City. Tree vs. view issues and the tree regulations have been polarizing amongst constituencies. Permit processes are a main point of interaction for urban forestry issues. Having a community tree board that meets on a regular basis can increase community participation on urban forestry issues and help ensure success with plan objectives by creating interactions between the community and the benefits of the urban forest.
Risk	Public does not have a way to voice opinions.
Benefit	This can improve community support for urban forestry funding and provide a public forum to resolve tree conflicts.

Criteria:	**General Awareness of Trees as a Community Resource**
Justification	Urban forest recognized as vital to the community's environmental, social, and economic well-being.
Performance	Low to optimal (to be confirmed with survey results).
Current Status	Trees are sometimes seen as a problem by developers and homeowners, while others recognize trees as vital to community, creating very polarized views. Public education on the City's tree protection ordinance, proper tree care and planting guidelines is not readily available.
Risk	Failure to integrate UFMP goals in the City's policies may limit effectiveness of plan, risk conflict or affect funding.
Benefit	Citizens more likely to invest their energy and resources to help achieve goals of Plan, appreciate the vital role of the urban forest in their communities, and are more likely to support urban forestry projects and program.

Criteria:	**Effective Tree Protection Codes or Ordinance**
Justification	Effective towards meeting City's 40% canopy goal, supports community vision as expressed in the Comprehensive Plan.

Performance	Optimal
Current Status	The City adopted wide-ranging tree protection regulations (KZC 95) in 2005. Code amended for clarity in 2009. Adequate staffing resources dedicated for code administration and enforcement. Canopy increased from 2002 (32%) to 2010 (36%) prior to annexation.
Risk	Loss of canopy and associated ecosystem benefits provided by trees, lower desirability to live, work, recreate in Kirkland vs. adjacent communities with greater aesthetic character.
Benefit	Greater environmental, social, and economic well-being.

Criteria:	**Regional Cooperation**
Justification	Provide for cooperation and interaction among neighboring communities and regional groups.
Performance	Low to moderate
Current Status	Plan objectives should be ongoing and have relevance wherever possible to the objectives of Washington State, King County, the Puget Sound Partnership, and neighboring municipalities Bellevue, Redmond, Bothell and Woodinville. At this point, clear regional goals for the urban forest do not exist, however, many cities have adopted the 40% canopy cover goal based on suggestions from American Forests (2007). The City has been a leader in creating local natural resource protection for its shoreline, trees and critical areas as encouraged in the Growth Management Act, Clean Water Act, etc.
Risk	Failure to integrate UFMP goals with regional goals may limit effectiveness of plan or risk conflicts with regional planning efforts.
Benefit	Cooperation with regional urban forest planning outside the City ensures the Kirkland urban forest is an integrated component of larger regional planning efforts. Regional partnerships can create pathways to stable and predictable funding.

Summary of Gap Analysis

In summary, Kirkland's overall urban forest performance based on these indicators is low to moderate. Although the City is performing well by several indicators, many other indicators cannot be evaluated with currently available data, including funding and indicators relative to the structure and condition of the urban forest resource. These critical gaps in the City's management of urban forest health are significant barriers to the potential success of the plan's implementation.

The outdated street tree inventory does not include the recently annexed area, and no inventory exists for trees in formally-landscaped parks. Although the City's 20-Year Forest Restoration Plan

provides an assessment of the quality and health of native trees and vegetation located in parks and open space, it does not include the significant acreage of open space in the annexation area. The 2011 Tree Canopy Assessment does include data in the annexation area and indicates Kirkland has achieved its canopy goal; however, the quality of the canopy is unknown.

Trees are a community asset and their management involves many departments within the City of Kirkland. Staff priorities for urban forestry operations are currently driven by reactive management tactics due to budgetary constraints. This limits the City's ability to realize efficiency gains from pro-active management. There is no centralized urban forestry program or division. Some operations involve a moderate level of informal, intra-departmental cooperation and communication. This lack of more formalized leadership results in a general disconnect between staff's understanding of the City's urban forestry policies and the public's understanding and application of them.

Residents, community groups, developers and other organizations that can influence and support urban forest management are important community resources for urban forest managers. As evidenced by the success of the Green Kirkland Partnership, the City has active neighborhood associations, volunteer groups and business interests that support natural resource stewardship. However without an updated urban forest management strategy; efforts from these groups are not always aligned with the greater community vision for Kirkland's urban forest. In addition, a recurring concern observed during this analysis was the lack of resources available to educate and engage the community on urban forestry issues. A greater emphasis on community outreach can help generate the support and community vision necessary for a sustainable and successful urban forestry program.

Kirkland is THE place to live

3. Community Outreach

In the previous section, a review of the City's performance resulted in an assessment of the City's urban forest program. It is essential to consider input and ideas from various external stakeholders in the preparation and implementation of this strategic plan. These groups can make significant contributions to the strategies and goals essential to the plan's success. A community outreach strategy was developed early in this process of creating this plan. The purpose of soliciting input is to gauge the community's:

- Vision and overall sentiment related to trees and ecological systems
- Understanding of tree-related codes and policies
- To understand the public's priorities for managing the urban forest resource

A number of strategies were employed to solicit input and guidance for the Plan. An on-line questionnaire was sent out to several City email listserv recipients. The results are summarized below and noted in Appendix C. The City sent out a news release, included a short article in the fall City Update newsletter and incorporated information on the draft plan on the City's webpage.

The City is partnering with Forterra to conduct a series of focus group discussions on the strategic plan. Forterra will summarize the outcomes of the focus groups with the results incorporated into the plan. Key stakeholders to participate in the focus groups include:

- Neighborhoods and residents
- Developers and business interests
- Community groups
- Tree care professionals and tree stewards

"[Urban forestry] is a planned and programmatic approach of the development and maintenance of the urban forest. It includes all elements of green infrastructure within the community in an effort to optimize the resulting benefits in social, environmental, public health, economic and aesthetic terms, especially when resulting from a community visioning and goal-setting process."

— Schwab, 2009

3.1 Summary of focus group meetings (to be inserted)

3.2 Summary of Survey Results (to be inserted)

A public involvement effort is being conducted to solicit input on the priorities, programs and strategies that will comprise the final plan. Agreement on the priorities and a systematic work plan will ensure that the City's urban forestry efforts are successful in achieving the desired outcomes.

4. Goals, Objectives, and Strategies

A comprehensive review and gap analysis of Kirkland's current urban forestry program, including management practices and policies, resulted in a benchmark of the current status and conditions. The goals and supporting objectives outlined in this section are aimed at addressing the identified gaps between existing conditions and optimal performance as established in "A Model of Urban Forest Sustainability" (Clark, et al, 1997) and guidelines from "A Framework for Strategic Urban Forest Management Planning and Monitoring" (Kenney, et al, 2011). Over the next 20 years, these goals will provide managers and City leaders with a long-range vision for Kirkland's urban forest resource and the City's urban forestry program. The objectives outlined in this section identify the critical steps necessary for realizing the full potential of the program goals, and are intended to address specific issues discovered through review of the four primary focus areas:

The Urban Forest Asset – goals that are intended to improve the urban forest resource over the next 20 years by developing detailed expectations for the urban forest and a greater understanding of the structure and condition of this resource. To accomplish these goals, the most common tactic will be to increase the amount of information the City maintains about its urban forest resource. These include routine tree canopy assessments and maintaining a street tree inventory, both of which can be substantial expenses to an urban forestry program and require significant consideration.

The City's Guiding Policies and Regulatory Framework – The City currently has a strong foundation of regulatory and policy framework to support a successful urban forestry program. However, alignment and additional adjustments can help streamline program goals and funding inadequacies.

The Municipal Urban Forestry Program – goals that are intended to drive improvements in City policy and practices by developing efficiency and alignment of efforts within City departments. The common tactics for accomplishing these goals is around developing policies that promote routine tree inspection and formalized tree management strategies for city-owned trees. These goals encourage the City to improve its awareness and mitigation of tree hazards and eliminate barriers to effective urban forest management.

Community Involvement – goals that are intended to build stronger community engagement and public participation in urban forest stewardship. The common tactic for accomplishing these goals is to formalize interdepartmental work groups in the City and coordinate the participation of citizens and businesses to align with the City vision.

The review identified numerous opportunities for Kirkland to improve program efficiency, increase public awareness and education, and enhance knowledge about the condition and structure of the urban forest resource. The criteria and indicators proposed by Clark, et al used to assess the current urban forestry practices provide the management reference necessary to frame the following long-range goals for the Plan:

- Urban forestry program
- Canopy
- Public engagement, outreach and education
- Program funding

While many of the recommended objectives presented here support more than one of these goals, this section provides an overview of each objective in relation to the primary goal it is intended to support. Strategies for accomplishing each objective are included where applicable. Table 8 illustrates those objectives that should be accomplished within the first 5-year work plan.

4.1 Municipal Urban Forestry Program Goals

It is important to distinguish the urban forestry program as an entity within the organization and within the community. Rather than being spread out between three departments with overlapping policies and responsibilities, the leadership, resources, and primary responsibility for the care and preservation of the urban forest should be formally recognized as existing within a single department and within the purview of a full-time urban forester. Establishing a formal forestry program, with dedicated staffing and resources, will focus authority for the stewardship of the community's urban forest and provide a centralized point for organized outreach and public education about the value and benefits of both public and private trees.

The following objectives are recommended in support of Kirkland's urban forestry program goal:

Establish a Formally-Recognized Forestry Program with Dedicated Staffing Resources

The establishment of a formally recognized forestry program within the City will validate the role of the Urban Forester and facilitate greater involvement in planning, development, and policy making. In addition, dynamic leadership and a visible urban forest program can have a dramatic affect on the overall, long-term success of the Urban Forest Management Plan by increasing public awareness of the goals and challenges of caring for the community's trees. The establishment of such a program will provide the necessary authority for:

- Implementing the Urban Forest Management Plan
- Increasing stability and efficiency of funding, staff, and other resources
- Providing leadership for interdepartmental cooperation and coordination with external groups
- Establishing a hub for public interactions

Establishing a formally recognized forestry program also supports the goals for canopy, program funding, and public engagement, outreach and education.

Create a Formal Interdepartmental Working Team

The creation of a formal interdepartmental working group will provide a platform for discussing the goals, objectives, and challenges related to the care, expansion, and sustainability of Kirkland's urban forest. With representation from Planning, Public Works, Parks, and the City's Urban Forester, the team can ensure that urban forestry issues receive appropriate consideration with regard to community planning, development, maintenance policies, and work planning.

Establishing a formally recognized forestry program also supports the goals for canopy.

Maintain a Comprehensive Inventory of Street and Park Trees

Maintaining a comprehensive and up-to-date inventory of individual public trees in parks and City right-of-ways, provides a critical foundation for management planning. Comprehensive inventory data forms the basis for efficient and effective work planning as well as accurate budget forecasting. In addition, complete and current inventory data can be used in conjunction with freely available, industry supported software to analyze the structure, value, benefits, and cost versus benefit ratio for urban forest assets.

Data maintained on individual trees should include:

- Unique identification
- Specific GIS location
- Genus and species
- Stem diameter at breast height (DBH, at 4'6")
- Condition rating
- Maintenance needs
- Work history

Maintaining an inventory of public trees on streets, parks, and right-of-ways also supports the goals for canopy, program funding, and public engagement, outreach and education, and is supported by the following strategies:

- Update and maintain current inventory
- Conduct inventory for recently annexed areas
- Synchronize and use city-wide work order, GIS, and permit database system
- Quantify the environmental, social, and economic benefits of trees
- Document tree condition and maintenance needs

Update Codes and Ordinances to Simplify and Provide Clarity

The city should conduct a periodic review and update of codes and ordinances that relate to the management and preservation of Kirkland's urban forest. Review should include consideration for current industry standards, recognition of the intended consequences, and simplification of language to promote greater clarity and compliance.

Updating codes and ordinances to simplify and provide clarity also supports the goals for canopy, and public engagement, outreach and education, and is supported by the following strategies:

- Compare codes and ordinances with most current industry standards and for similar communities
- Review measurable outcomes as a way of evaluating the effectiveness of current regulations and policies
- Consider feedback from staff, residents, and developers to improve clarity and promote compliance

Tree Planting Guidelines

Developing and promoting tree planting guidelines for the installation of public trees will provide greater compliance with best management practices, promote greater tree health and longevity, and increase economic and environmental benefits. Tree planting guidelines should provide for the following considerations:

- Selection of species based on size at maturity and available planting space
- Species selection based on landscape application and desired benefits
- Identify specific applications and standards for structural soils, suspended pavement (e.g., Silva Cells), pervious pavement, and stormwater management strategies

- Planter design and installation specifications and details that in compliance with industry standards for best management practices

Establish Dedicated Resources for Public Tree Maintenance

Establishing staff and equipment resources dedicated to maintaining the City's urban forest assets will facilitate program efficiency, work planning, and budget forecasting. In addition, having a dedicated staff will promote better and more consistent tree care, higher standards for education and certification, and greater compliance with best management practices.

Establishing dedicated resources for public tree maintenance also supports the goals for canopy, and program funding, and is supported by the following strategies:

- Identify the number of staff needed to fulfill current and desired levels of maintenance
- Ensure qualified arborist staff in Parks and Public Works
- Train and certify field crews and staff to promote and maintain expertise, professional performance, and compliance with industry safety standards
- Identify and provide equipment resources necessary for tree care operations

Require Compliance with Industry Standards for Contractors and Staff

Require that all contractors and City staff involved in the installation, protection, care, and maintenance of public trees adhere to industry accepted standards and best management practices (BMPs) for tree care operations. These standards provide detailed criteria for all common tree care activities, including planting, support systems, fertilization, and tree risk assessment. They should be referenced and required in all contracts, bid solicitations, and internal maintenance policy guidelines.

Requiring compliance with industry standards for contractors and staff should include observance of the following specific standards:

- American National Standards Institute (ANSI) ANSI A300 Series Standards for Tree Care Operations
- International Society of Arboriculture (ISA) Best Management Practices Series
- ANSI Z133 Safety Standards
- Occupational Safety and Health Administration (OSHA) Standards, Sections 1910.132, 190.133, 1910.135, and 1910.95

Develop Annual Work Plans

An annual work plan can help to better focus and track the long-term goals and objectives outlined by the Urban Forest Management Plan. In addition, having an annual plan can facilitate budget forecasting and justify program funding requirements.

Based on the goals and objectives outlined in this Plan, along with reasonable consideration for availability of staff and funding resources, the City's Urban Forester should develop an annual work plan aimed at accomplishing the recommendations for 5-year objectives outlined in Section 4.6 of this Plan.

Developing annual work plans also supports the goals for program funding, and public engagement, outreach and education.

Update Urban Forest Management Plan Every 5 Years

The Urban Forest Management Plan is designed to be adaptive to change over time and with updates to criteria and indicators. Updates should consider the accomplishment of Plan objectives as well as quantitative analysis of progress made towards reaching long-term goals. A comprehensive review should be taken in the final year of each management planning cycle, and ideally in consultation with a technical advisory committee and key stakeholders. The successes and shortcomings experienced after each five-year planning period should be reviewed, and the findings incorporated into the subsequent management plan

Updating the Urban Forest Management Plan every 5 years also supports the goals for canopy, program funding, and public engagement, outreach and education, and is supported by the following strategies:

- Identify key staff members and community stakeholders to serve as an advisory committee
- Invite participation from the Tree Board
- Evaluate progress, challenges, and remaining objectives
- Consider changes within the industry that may affect criteria and indicators

Deliver an Annual Urban Forestry Report

Public support is critical to a successful and sustainable urban forest program. A State of the Urban Forest Report is the perfect way to communicate progress and milestones as they are

reached. The report provides an opportunity to update stakeholders on the status of the Urban Forest Management Plan, including objectives that have been met as well as any challenges or issues that may be holding up the Plan. Keeping stakeholders well informed is the best way to generate support and enthusiasm.

Delivering an annual State of the Urban Forest Report also supports the goal for public engagement, outreach and education.

Partner with Puget Sound Energy (PSE) and Seattle City Light (SCL) on Vegetation Management Plans for Utility Corridors

Collaboration with utilities for inspection and maintenance of trees that are within City and utility rights-of-way can provide additional cost savings to both parties. Working with PSE and SCL to develop vegetation management plans for the City's utility corridors can provide Kirkland forestry managers with an opportunity to address concerns about protecting tree health under utility lines (where possible), reducing and avoiding tree utility conflicts, and considerations for risk management. Ideally, the resulting plans will align Kirkland's tree protection codes and the needs of the utilities.

Partnering with PSE and SCL on vegetation management plans for utility corridors also supports the goals for program funding, and public engagement, outreach and education, and is supported by the following strategies:

- Encourage consideration for "right tree, right place" concepts in species selection where overhead lines are present
- Incorporate industry standards and best management practices into utility pruning guidelines
- Seek grants and incentive programs for tree replacement when removal is necessary

Maintain Tree City USA Status

Tree City USA recognition from the National Arbor Day Foundation (NADF) demonstrates Kirkland's commitment to protecting its urban forest and can play a role in the successful acquisition of grant funding. The designation has requirements for meeting specific criteria, including:

- Spend $2 per capita annually on an urban forest program or tree related expenses
- Adopt a tree protection ordinance
- Proclaim and celebrate Arbor Day annually
- Establish a municipal urban forestry program or a Tree Board

Due to the increase in population with the recent annexation, the annual per capita spending for the urban forest program has decreased and without planning its urban forestry budget, Kirkland may have difficulty maintaining its Tree City USA designation in the future.

Maintaining Tree City USA recognition also supports the goals for program funding, and public engagement, outreach and education, and is supported by the following strategies:

- Budget and track spending for the urban forest program to ensure minimum annual requirements of $2 per capita
- Continue to celebrate Arbor Day
- Investigate additional opportunities for Growth Awards from NADF

4.2 Canopy Goals

The amount and distribution of leaf surface area is the driving force behind the urban forest's ability to produce benefits for the community (Clark, et al. 1997). As canopy cover increases, so do the benefits afforded by leaf area. While the City has realized its overall 40% canopy goal as of the recent annexation, maintaining overall canopy cover and increasing canopy in strategic areas to further maximize benefits, should remain a focus for the urban forestry program. A comprehensive awareness of where canopy currently exists, where existing canopy is threatened (e.g., by development or invasive species), and where there are opportunities for increasing canopy, can help the City balance continued development with protection of the communities urban forest assets

The following objectives are recommended in support of Kirkland's canopy goal:

Analyze Canopy Benefits

Quantifying the value and benefits of Kirkland's tree canopy can provide important perspective for maintaining a level of canopy cover that provides the amount of environmental and economic services desired by the community. Available and emerging software, including i-Tree Eco, i-Tree Vue, and CITYgreen, can be used in conjunction with landcover data to quantify the specific benefits of Kirkland's tree canopy, including benefits to air quality, carbon sequestration, and stormwater management. This awareness, evaluated in conjunction with other GIS data, including land-use, parcel data, watersheds, and stormwater drainage areas, is an important tool for preservation. Understanding the current level of benefits can provide critical information for public outreach and communication about the value of Kirkland's trees and the importance of proactive management.

Analysis of canopy benefits also supports the public engagement, outreach and education goal, and is supported by the following strategies:

- Seek grant funding for canopy benefit analysis
- Perform an i-Tree Eco and/or i-Tree Vue analysis
- Present canopy benefit results to the public

Increase Canopy in Key Areas

Increasing canopy in key areas, including areas that are currently underserved and locations where preservation is already supported, will help the City maintain overall canopy goals while continuing to promote economic and community development. The Integration of landcover data into the City's GIS system will provide urban forestry and planning staff with the tools needed to monitor canopy cover, anticipate threats and challenges to canopy preservation, and respond perceptively to requests for tree removal. Once integrated, the landcover data can be further analyzed along with other GIS layers to understand the relationship of canopy to other factors, including:

- Zoning
- Land use
- Neighborhoods
- Watersheds
- Open space
- Preservation areas
- Areas at high risk for development

Understanding these relationships can help Kirkland determine where best to focus tree planting resources that will maintain and enhance the existing canopy cover and associated benefits.

Increasing canopy in key areas also supports the public engagement, outreach and education goal, and is supported by the following strategies:

- Integrate landcover data into the City's GIS system
- Analyze canopy cover by neighborhood, zoning, and watershed
- Seek grant funding for tree planting and forest restoration
- Coordinate with Green Kirkland Partnership in support of reforestation
- Increase public awareness of high value canopy

Conduct Canopy Assessment Every Ten Years

The urban forest is part of a dynamic ecosystem, responding constantly to external pressures, including development, weather, climate, pests, disease, and patterns of use by humans and wildlife. Periodic updates to the landcover GIS map layer allows urban forest managers to identify changes in canopy, and may provide critical knowledge for a quick response to changing conditions and threats to Kirkland's forests.

Conducting a canopy assessment every 10 years also supports the public engagement, outreach, and education goal, and is supported by the following strategies:

- Develop a procedure for canopy assessment that ensures consistent analysis
- Include canopy assessment in future urban forest management plans
- Establishing long-term funding

- Seek grant funding for canopy assessment
- Share information about changes and threats to the canopy with the public

Develop a Planting Program

The value of Kirkland's urban forest should continue to increase as existing trees mature and new trees are planted. Developing a planting program can help urban forest managers focus tree planting resources in the most efficient manner and where they will provide the greatest benefits. In addition, a planting program should tie in with the objective to increase canopy in key areas.

A successful planting program will consider the following factors:

- Identification of appropriate species based on compatibility with local climate, landscape application, and planter size
- Promoting a diverse species distribution
- Promoting a diverse age distribution

Another very important, but often overlooked, consideration for any planting program is future maintenance. As a community's urban forest resource grows, continued investment in management is critical to ensuring that residents will continue to receive a high return of benefits on their investment. Planning and funding for tree care and tree management must complement planting efforts in order to ensure the long-term success and health of the urban forest. Existing mature trees should be maintained and protected whenever possible, since the greatest benefits accrue from the continued growth and longevity of the existing canopy.

Developing a planting program also supports the public engagement, outreach, and education goal, and is supported by the following strategies:

- Identifying appropriate public spaces for tree planting
- Developing tree planting strategies including setting annual planting targets for street and park trees
- Supporting neighborhood and volunteer efforts
- Considering incentives for tree planting
- Continuing support of the Green Kirkland Partnership program
- Considering implementing a rebate (Tree-bate) program
- Enlisting public support for the protection and establishment of newly planted trees

Manage the Urban Forest for a Diverse Age Distribution and Species Diversity

Diversity of both species and age within an urban forest is an indicator of long-term stability. The distribution of individual trees of various age within a tree population influences present and future costs as well as the flow of benefits. An unevenly aged population allows managers to allocate annual maintenance costs uniformly over many years and assures continuity in overall tree canopy coverage and associated benefits. A desirable distribution has a high proportion of

young trees to offset establishment and age related mortality as the percentage of older trees declines over time (Richards, 1982/83).

Maintaining a diverse species population is equally important. Dominance of any single species or genus can have detrimental consequences in the event of storms, drought, disease, pests, or other stressors, which can severely affect an urban forest and the flow of benefits and costs over time.

Managing the urban forest for a diverse age distribution and species diversity is supported by the following strategies:

- Analyzing existing conditions
- Ensure consideration for species and age distribution is a consideration of the planting plan
- Encourage or require planting of native species
- Plant suitable species and plan for replacement of unsuitable species

Update the 20-Year Forest Restoration Plan for Annexed Areas

With the recent annexation and the addition of 2,187 acres of tree canopy, the City's tree canopy has nearly doubled in size since the 20-Year Reforestation Plan was adopted in 2008. This plan should be updated to include newly annexed natural areas and to support long-range planning efforts and the goals of the Comprehensive Plan.

Updating the 20-Year Forest Restoration Plan also supports the goals for program funding, and public engagement, outreach and education, is supported by the following strategies:

- Identify natural areas with the newly annexed locations
- Seek collaboration of resources and funding through Forterra, Green Seattle Partnership, Green Cities Partnership, and other grant funded sources

4.3 Public Engagement, Outreach, and Education Goal

A successful and sustainable urban forestry program requires support and enthusiasm from the community. Many beneficial programs, including urban forest management, struggle to maintain adequate funding and attention from community leaders. Engaging the public by increasing awareness of the value and benefits of public trees and educating residents about the goals and challenges of managing the urban forest is key to developing their support for tree protection policies, funding, and other resources.

As mentioned previously in Section 2.6, a recurring concern observed during the development of this plan, and program review, was the lack of resources available to educate and engage the community about urban forestry issues. Without a formally recognized forestry program and dedicated staffing resources, Kirkland has struggled at times to successfully engage the public about urban forestry policies and their application. While staff resources will need to be dedicated to the cause, the goals and strategies outlined in this Urban Forest Management Plan provide a

clear vision for engaging residents, community groups, developers, and other organizations that share an interest in Kirkland's urban forest.

The following objectives are recommended in support of the public engagement, outreach and education goal:

Increase Public Outreach and Develop Support for Urban Forestry Issues and Regulations

Increasing public outreach will facilitate greater understanding and compliance with the City's tree protection regulations. Greater outreach should reduce controversy and misunderstanding with regard to tree permit requirements, where there is a general disconnect between staff's understanding of the City's policies and the public's understanding and application of them.

Increasing public outreach and developing support for urban forestry issues and regulations also supports the urban forestry program goal, and is supported by the following strategies:

- Provide educational opportunities for City staff, developers, landscapers, consulting arborists, and homeowners on city requirements, development review procedures, and proper tree care
- Identify regional planning groups and opportunities for engagement
- Develop presentations, workshops, and materials to communicate important concepts about trees and Kirkland's urban forest.
- Continue to celebrate Kirkland Arbor Day
- Establish a recognition program and Heritage Tree program

Engage Community Groups, Neighborhood Associations, and Green Industry Businesses

Public engagement describes the myriad ways in which information, activity, and benefits associated with the urban forest can be shared with the public. It is by definition, a two-way process that involves interaction and listening with the goal of accomplishing a mutual benefit. Through engagement with stakeholders that directly benefit and have a vested interest in promoting a healthy urban forest, a network of support for policies, procedures and funding is created. Engaging community groups in urban forest goals and challenges not only develops the support base necessary for a sustainable program, it also increases the opportunities for volunteer service and collaboration with non-profits and special interest groups. Sharing the challenges of urban forest management

Engaging community groups, neighborhood associations, and green industry businesses is supported by the following strategies:

- Identify community groups with a stake or interest in the urban forest
- Develop presentations and workshops that promote active engagement in urban forest issues and challenges
- Seek opportunities for collaboration with groups and organizations who share a vision for urban forest goals

Establish a Community Tree Board

A vital part of public engagement is involving residents in the important, long-term decisions that must be made about the urban forest. Establishing a community tree board to advise urban forest managers and City Council on urban forest issues, including management plan goals and objectives, is a good way to engage the support of community leaders. Establishment of such a group may include the following considerations:

- Appointment by Mayor and/or City Council of 3-7 board members
- Board members are residents of the community
- Board members serve voluntarily with no compensation
- City Urban Forester serves as an information resource to the tree board

Establishing a community tree board also supports the urban forestry program goal, and is supported by the following strategies:

- Draft and adopt an ordinance establishing a community tree board
- Solicit applications of residents willing to serve on a community tree board
- Encourage, or require, board members to attend online Tree Board University (treeboardu.org)
- City Urban Forester attends board meetings and serves as an information resource

4.4 Program Funding Goals

Like many communities, Kirkland struggles with the challenge of generating reliable and sustainable funding for urban forestry programming. Considering the likelihood that budgets will continue to remain tight, at least in the foreseeable future, the urban forestry program will need to operate with optimal efficiency and program leaders will need to identify and explore creative options, including options for funding, volunteers, and collaboration, which maximize the value of available resources. In addition, public outreach will be a crucial component for communicating the status of plan objectives, engaging support, and facilitating collaboration. Identifying new funding sources and opportunities for collaboration with groups that share urban forest objectives will be crucial to meeting goals and long-term objectives.

The following objectives are recommended in achieving the goal of program funding:

Dedicate Funding for Green Kirkland Partnership

The Green Kirkland Partnership works to restore the community's natural forest areas and manage risks to forest health from invasive species. This successful program, an alliance between the City of Kirkland, nonprofit partners, businesses, and the community, relies heavily on volunteer participation. Dedicated funding would provide for additional City staff to support volunteer training and supervision, and for the application of herbicides.

Dedicating funding for Green Kirkland Partnership also supports the goals for canopy and public engagement, outreach and education,

Establish Funding Options for Tree Planting Program

Investigate and establish funding sources to support a tree planting program, including the cost of trees, installation, and structural pruning and maintenance during the establishment period.

This objective also supports goals for canopy and public engagement, outreach and education, and is supported by the following strategies:

- Explore opportunities for partnership and collaboration with utilities and non-profit groups
- Investigate opportunities for grant funding for tree planting and replacement
- Ensure that CIP planning includes consideration for optimizing tree planting in proposed project areas.

Identify Costs and Funding Approach for Tree Inventory Work

Completing a comprehensive and updated tree inventory collection is an important objective for this Plan. Identifying the costs and a funding approach for completing this work is critical to the success of a number of objectives aimed at acquiring significant information about the structure, condition, value, and benefits of Kirkland's urban forest

This objective also supports goals for urban forestry program, canopy, and public engagement, outreach and education, and is supported by the following strategies:

- Explore opportunities for state and national urban forestry grants (e.g., Washington DNR), that often support the collection of inventory data for established urban forestry programs

Establish Dedicated Funding for Public Tree Maintenance (tree crew and equipment)

Tree maintenance (including structural pruning), providing for clearance, and mitigating hazardous conditions are a vital part of urban forest management. The City will need to justify and establish dedicated funding for the staff and equipment necessary for meeting the maintenance expectations of the community.

Establishing dedicated resources for public tree maintenance also supports goals for urban forestry program and canopy, and is supported by the following strategies:

- Identify the number of full-time staff needed to fulfill current and desired levels of maintenance
- Identify equipment needs
- Calculate cost of funding staff and equipment dedicated to public tree maintenance
- Explore funding sources applicable for public tree maintenance (See Section 4.6)

Continue to Explore Various Funding Programs and Opportunities such as Grants, Donations, and Partnerships

In order to fund forestry operations and special projects, urban forestry managers will need to ensure efficient use of available funding while exploring new opportunities for sustainable funding, grants, volunteers, partnerships, and collaboration (See Section 4.6).

Continuing to explore various funding programs and opportunities such as grants, donations, and partnerships also supports goals for urban forestry program and canopy, and is supported by the following strategies:

- Justify and protect established funding sources
- Proactively seek partnerships and collaboration with volunteer, non-profit, and special interest groups that share a similar mission
- Explore all opportunities for grants and donations

4.5 Recommended 5-Year Objectives 2013-2018

The following recommended objectives direct urban forestry activities over the next five years. The lead department assigned for each objective was based on current departmental staffing, and is not necessarily a requirement. All objectives in the plan will need coordination with the City Manager's Office and the Finance Department to develop appropriate funding. Priorities for these objectives should be based on funding and their relative value toward successfully achieving plan goals. While costs and value are subjective estimates, general guidelines for setting priorities have been provided to describe the cost and value of each objective to the strategic plan goals (Table 7 and Table 8).

Table 7. Cost and Value categories used to help prioritize objectives

Cost	This is the relative value of budget costs required to accomplish the objective
$	Estimated at less than $50,000. These objectives are often accomplished with existing City staff resources.
$$	Estimated between $50,000 - $100,000. These objectives will almost certainly have budgetary implications, dedicated staffing, contractor or volunteer commitment.
$$$	Estimated at greater than $100,000. These objectives involve substantial project management, staffing and commitment.

Value	Relative value of the contribution toward successfully meeting strategic goals.
Low	Objective supports less than 5 plan strategic goals.
Moderate	Objective supports between 5-7 strategic goals.
High	Objective supports more than 7 strategic goals.

Table 8. Recommended 5-Year Objectives (2013-2018)

Objective	Applicable Goal	Product	Cost	Value	Participating Departments
Establish a formally recognized Forestry Program with dedicated staffing resources	Forestry Program Canopy Funding Outreach	Formal Forestry Program	$ $	High	**Planning** **Parks** **Public Works**
Create a formal interdepartmental working team	Forestry Program Canopy	Team	$	Moderate	**Planning** **Parks** **Public Works**
Maintain a comprehensive inventory of street and park trees	Forestry Program Canopy Funding Outreach	Up-to-date Inventory Database integrated with City GIS system	$ $ $	High	**Parks** **Public Works**
Update codes and ordinances to simplify and provide clarity	Forestry Program Canopy Outreach	Revised codes and/or ordinances	$	Moderate	**Planning** **Public Works**
Tree Planting Guidelines	Forestry Program	Standards, details, species list	$	High	**Planning** **Public Works**
Establish dedicated resources for public tree maintenance	Forestry Program Canopy Funding	Dedicated staffing and equipment	$ $ $	High	**Parks** **Public Works**
Require compliance with industry standards for contractors and staff	Forestry Program	Requirements for industry standards in contracts and specifications	$	High	**Planning** **Public Works** **Parks**
Develop annual work plans	Forestry Program Funding Outreach	Annual Work Plan	$	Moderate	**Planning**
Update Urban Forest Management Plan every 5 years	Forestry Program Canopy Funding Outreach	5-Year Management Plan	$ $	High	**Planning** **Public Works** **Parks**
Deliver an annual State of the Urban Forest Report	Forestry Program Outreach	State of the Urban Forest Report	$	Moderate	**Planning**
Partner with PSE an SCL on Vegetation Management Plans for utility corridors	Forestry Program Funding Outreach	Vegetation Management Plans	$ $	Moderate	**Planning** **Public Works**
Achieve Tree City USA annually	Forestry Program Funding Outreach	Tree City USA recognition	$	Moderate	**Planning**

Objective	Applicable Goal	Product	Cost	Value	Participating Departments
Analyze canopy benefits	Canopy Outreach	Quantitative analysis of the value and benefits of Kirkland's tree canopy	$ $	Moderate	**Planning**
Increase Canopy in key areas	Canopy Outreach	Increased canopy	$ $	High	**Planning** **Parks** **Public Works**
Conduct canopy assessment every 10 years	Canopy Outreach	Updated canopy assessment	$ $ $	High	**Planning**
Develop a planting program	Canopy Outreach	Planting Program	$ $	Moderate	**Planning** **Parks** **Public Works**
Manage the urban forest for a diverse age distribution and species diversity	Canopy	Increase diversity of species and age distribution	$ $	Moderate	**Planning**
Updating the 20-Year Forest Restoration Plan for annexed Areas	Canopy Funding Outreach	Updated 20-Year Forest Restoration Plan	$ $	High	**Parks**
Increase public outreach and develop support for urban forestry issues and regulations	Outreach Forestry Program	Presentations, workshops, educational materials	$ $	High	**Planning** **Parks**
Engage community groups, neighborhood associations, and green industry businesses	Outreach	Increase exposure with community groups, neighborhood associations, and green industry	$	Moderate	**Planning**
Establish a Community Tree Board	Outreach Forestry Program	Community Tree Board	$	Moderate	**Planning**
Dedicate funding for Green Kirkland Partnership	Funding Canopy Outreach	Funding for Green Kirkland Partnership Success with 20-Year Forest Restoration Plan	$ $ $	High	**Planning** **Parks**
Establish funding options for tree planting program	Funding Canopy Outreach	Funding for tree planting program	$	Moderate	**Planning**
Identify costs and funding approach for tree inventory work	Funding Forestry Program Canopy Outreach	Funding for tree inventory	$	High	**Planning**
Establish dedicated funding for public tree maintenance (tree crew and equipment)	Funding Forestry Program Canopy	Funding for public tree maintenance	$	High	**Planning**

Objective	Applicable Goal	Product	Cost	Value	Participating Departments
Continue to explore various funding programs and opportunities such as grants, donations, and partnerships	Funding Forestry Program Canopy	Additional funding sources	$	High	**Planning** **Parks**

4.6 Potential Program Funding Strategies

Generating reliable urban forestry funding remains an ongoing challenge for most communities, Kirkland included. Shrinking municipal budgets and expanding deficits may limit traditional, government-generated funding for urban forestry budgets, creating a need for new avenues of program funding strategies. By diversifying funding strategies and sources, long term objectives are achieved without sacrificing either medium-term priorities or day-to-day operational costs. Adequate funding for achieving the goals and objectives within this plan will be critical to its success.

Kirkland has worked with state and federal agencies to obtain grant money to support urban forestry projects, including the development of this plan. Funding strategies such as the **City's Forestry Account, grants, philanthropic donations, volunteer efforts, permit fees** and even the **general fund** allocations can be excellent strategies for short term projects. However, these are volatile sources to rely on for long-term urban forestry objectives. This section details some potential funding strategies that have been utilized in other jurisdictions to generate stable and predictable financial resources for urban forest management in addition to the municipal general fund, which is generated from a tax base.

In the event of severe catastrophes, the City can be eligible for financial assistance if it can demonstrate, with baseline data, the extent of tree failure or damages associated with trees. The Federal Emergency Management Agency (FEMA) and other state and federal institutions release funds in the event of an emergency, but are typically more supportive when the damaged assets have been documented and specific monetary damage assessments are provided promptly after the emergency. To be prepared for emergencies, many cities have adopted the FEMA-approved i-Tree STORM as their damage assessment protocol. In order to obtain the baseline data necessary for re-imbursement, or use i-Tree STORM, a tree inventory is required.

Surface Water Management Fees or Utility Funding

Cities that actively manage their green infrastructure to improve stormwater quality and reduce peak flows typically utilize stormwater utility funding. Two cities in Washington, Bellevue and Vancouver, are currently using this as a funding source. The City of Bellevue has combined the maintenance of parks with stormwater management and has funded mandates that protect riparian open space for over two decades. In Vancouver, urban forestry is supported by utilizing a portion of the City's surface water management fees. These funds are used specifically to provide City services related to canopy restoration: coordination of contractor and volunteer tree planting efforts, outreach and education to promote environmental stewardship, and enhanced customer service. The use of this funding source is in recognition of the importance of the urban

forest for stormwater management functions, water quality protection, and Clean Water Act, Clean Air Act, and Endangered Species Act compliance.

Capital Improvement Projects

Treating trees as capital assets can help to ensure that budgets for large-scale projects include line items for trees. Projects for building or expanding items such as roads or bridges often have an impact on existing trees. If trees are identified as a capital asset, funding can be guaranteed as part of the construction project budget such that any tree impacts will be mitigated through replacement or relocation. Examples where this could apply include major street and freeway improvements, the Cross Kirkland Corridor, stormwater projects, major park projects.

As capital assets, trees are different than items such as bridges and roadways and other "gray infrastructure." With most type of assets, their value is depreciated over their useful lifespan. Trees, on the other hand, continue to grow in value throughout their lifetime, in terms of benefits returned to the community. The Government Accounting Standards Board has set procedures for accounting for capital assets in its GASB 34 rule. Although these procedures typically are used for gray infrastructure and accounting for depreciation, trees can also fit into the GASB 34 program model. Trees can be described as asset management within GASB 34. This will avoid the cost less depreciation model of a typical City infrastructure.

To accomplish this, a complete inventory of City tree assets must be performed to be able to report the current condition of the City asset (trees). The City must also then define a desired condition of the urban forest (asset) and the management costs and activities necessary to maintain the forest at that desired level.

Excess Levy

Another fund raising strategy is the use of citizen approved levies. Washington law allows cities to levy property taxes in excess of limitations imposed by statute when authorized by the voters. Levy approval requires 60 percent majority vote at a general or special election. Excess levies by school districts are the most common use of this authority.

Currently in Kirkland, a park levy ballot measure is being considered for the 2012 November election. The measure would include funding for park land acquisition, support tree maintenance and provide stable on-going funding for the Green Kirkland (GKP) program, allowing the City to grow the GKP program over time.

This has proven successful in Seattle where, in November 2000, Seattle voters approved a $198.2 million levy for Parks and Recreation. The levy followed closely the plan forged by the Pro Parks 2000 Citizens' Planning Committee. The annual cost to the average Seattle property owner during the life of the levy was expected to be approximately $.35 per $1000 assessed value.

Within the levy, Seattle added a Pro Parks tree crew that enabled them to perform preventive maintenance on selected trees. Under the supervision of their Urban Forestry Crew Chief, the Tree Maintenance crew responded to 410 work orders in 350 parks in 2008. A Natural Area Crew was created to allow for cleanup and restoration work in natural areas and forests. Natural Area Crews performed 3,600 hours of labor, supplemented by nearly 5,000 hours of volunteer labor. The team completed 56 work orders, worked with volunteers on 50 projects and worked in 30 parks.

The Levy provides funding for the work of the Green Seattle Partnership. Additionally, the Green Seattle Partnership formed in 2004 and has worked to restore 2,500 acres of forested park land in Seattle by 2025. The unique public/private effort is the largest urban forest restoration project in the nation. Levy funding contributed to the restoration of 126 acres of urban forest in the first two years of the Levy.

This cultural momentum from Seattle's efforts continued in 2008 with the passage of a **Parks and Green Spaces Levy**. It is expected to raise $146 million and will last for six years, from 2009 through 2014. Within this levy remains a $6.6 million Environment category, which is dedicated to creating a healthy ecosystem for Seattle. This "green" funding has three types of projects: Forest and stream restoration, community gardens and shoreline access.

General Obligation Bonds

For the purposes of funding capital projects, such as land acquisitions of facility construction, cities and counties have the authority to borrow money by selling bonds. Voter-approved general obligation bonds may be sold only after receiving a 60 percent majority at a general or special election. If approved, an excess property tax is levied each year for the life of the bond to pay both principal and interest.

Real Estate Excise Tax (REET)

Washington law authorizes the governing bodies of counties and cities to impose excise taxes on the sale of real property within limits set by the statute. Two (2) taxes of ¼ of 1% may be imposed; however, the funds can only be used on capital projects listed in the capital facilities plan. Specifically related to urban forestry, such projects would likely need to be associated with one of the following project types to be eligible: parks; recreational facilities; trails; or river and/or waterway flood control projects. Currently, REET can be used for maintenance or operations on a limited basis. Unless reauthorized by the legislature, this will expire at the end of 2016.

Utility Company Partnerships

Collaboration with utilities such as Seattle City Light (SCL) and Puget Sound Energy (PSE) for inspection and maintenance of trees that are within City and utility rights-of-way can provide additional cost savings to both parties. Where community values of electric reliability and sound tree care intersect, partnerships between utility and municipalities often emerge. In Kirkland, this has included financial support for Arbor Day celebrations by PSE and preliminary discussions of developing vegetation management strategies that are aligned with Kirkland's tree protection codes and the needs of the utility. This is particularly valuable because the utilities may remove partially or entirely hazardous trees in the rights-of-way at no cost to the city. In the past, PSE and SCL have provided vouchers for replacement of appropriate trees under overhead utility lines. Seattle City Light has a model Urban Tree Replacement program to ensure a succession of the

"right trees, right place" where overhead utilities pose a challenge to maintaining a healthy urban forest

Landscape Maintenance District (LMD)

This funding source can be used by property owners who vote to assess themselves an annual fee to pay and receive services beyond what the City normally provides. The Finn Hill Park and Recreation District is an example. It was created by the November 20, 2002 King County General Election as a result of passage of ballot Proposition No. 1. Proposition 1 authorized a tax levy for the creation and maintenance of the Finn Hill Park and Recreation District. The ballot measure was presented to voters who resided within the park district boundaries.

Districts like these can also be formed when a new subdivision is built. The City can require the developer to pay the assessments until they can be turned over to a homeowners association or LMD. Even in small developments, fees can be assessed to the parcels on an annual basis that contribute to the costs of receiving increased maintenance and care of the trees in the project. When a LMD is created, it is specifically documented what additional services will be provided for the assessment. This can include such items as regular tree pruning, litter cleanup, and planting projects. LMDs are also known as maintenance assessment districts, lighting and landscape maintenance districts, or local improvement districts.

Business Improvement Districts (BIDs)

Similar to the LMD strategy, Business Improvement Districts (BIDs) are an additional assessment that can be levied against the property owners to provide increased services in the assessed area. BIDs are formal organizations made up of property owners and Mixed-use commercial tenants dedicated to the improvement of quality of life within their districts. In Spokane, Washington, the Downtown Spokane Partnership manages a streetscape Clean Team and a Green & Beautiful program with BID funding. In Tacoma, Washington, they have a BID that operates separately from the City government with their own full-time staff providing neighborhood maintenance.

These differ from LMDs in that BIDs are usually self-managed entities as opposed to being managed by the City. BIDs are often compared to residential homeowners associations. Many cities and their contractors allow their BIDs to obtain services such as tree maintenance, street maintenance, and litter cleanup at the same discounted rates as the City pays

Street Repair Funds

The City of San Diego, California has been successful in leveraging street repair funds to contribute to the maintenance of their ROW trees. San Diego's code provides that, when street maintenance activities are conducted, all City assets within that ROW receive any required maintenance. The City urban forester has been successful in extending that maintenance to the trees within the ROW where the street maintenance is being performed.

Frontage Assessments

These are typically applied citywide based on the feet of street frontage a property occupies. Fees are collected annually and dedicated to the program for which they are being assessed. Unlike general fund monies, which change and are approved annually, frontage assessments can be created to provide a consistent funding source to support ongoing maintenance and

enhancement of City street trees. The City of Pittsburg, California receives its entire urban forestry budget from a $0.17/foot assessment on private properties.

projects. LMDs are also known as maintenance assessment districts, lighting and landscape maintenance districts, or local improvement districts.

Utility Company Partnerships

Collaboration with utilities such as Seattle City Light (SCL) and Puget Sound Energy (PSE) for inspection and maintenance of trees that are within City and utility rights-of-way can provide additional cost savings to both parties. Where community values of electric reliability and sound tree care intersect, partnerships between utility and municipalities often emerge. In Kirkland, this has included financial support for Arbor Day celebrations by PSE and preliminary discussions of developing vegetation management strategies that are aligned with Kirkland's tree protection codes and the needs of the utility. This is particularly valuable because the utilities remove hazardous trees in the rights-of-way at no cost to the city. In some cases this includes replacement of appropriate trees near overhead utility lines. Seattle City Light has a model Urban Tree Replacement program to ensure a succession of the "right trees, right place" where overhead utilities pose a challenge to maintaining a healthy urban forest

City Forestry Account

As a component of the city's Tree Conservation and Landscaping Ordinance (KZC 95.57), a tree fund was established to receive funds from all tree-related, civil penalties and other revenue sources such as the sale of trees, wood and/or seedlings. Funds in the tree account can be used for a variety purposes including acquiring, maintaining, and preserving wooded areas within the city, establishing a holding public tree nursery, conducting urban forestry education, and implementing a tree canopy monitoring program. Additionally, grants and donations received can be placed into this fund.

Private Fundraising

Fundraising projects are used to support special projects and programs. Tree climbing tournaments and plant sales are two examples of successful fundraising efforts. Specific types and sources of fundraising are identified below.

Endowment / Trust Fund

An endowment or trust fund, similar to the Casey Tree Endowment Fund of Washington D.C., could provide a funding source for future tree planting projects and maintenance operations. An aggressive capital campaign could raise the seed money to establish the fund, with future interest earned providing a stable, steady revenue stream.

Business Sponsorships/Donations

Business sponsorships for programs are available throughout the year. Sponsorships and donations can be of any value.

Grants, Donations & Gifts

Many trusts and private foundations provide funding for park, recreation and open space projects. Grants from these sources are typically allocated through a competitive application process, and vary dramatically in size based on the financial resources and funding criteria of the organization.

Philanthropic giving is another source of project funding. Efforts in this area may involve cash gifts and include donations through other mechanisms such as wills or insurance policies. Community Forestry Assistance Grants are available through the Washington State Department of Natural Resources, utilizing funding from the USDA Forest Service. Over $330,000 in grant money was available in 2011-2012 to be used for ordinance development, tree inventory efforts, or development of a street tree management plan. Other grant monies are available through organizations such as the National Tree Trust (NTT) and the National Urban and Community Forestry Advisory Council (NUCFAC), two prominent national urban and community forestry nonprofit organizations.

Interagency Agreements

State law provides for interagency cooperative efforts between units of government. Agreements between Kirkland and neighboring jurisdictions and King County are an example.

4.7 Plan Oversight

To achieve the highest level of efficiency and reduced liabilities, well-executed strategies require monitoring and oversight. The most appropriate strategy for success with this plan is to have a department, position, or designated team who will provide oversight to this plan. Long-range objectives require interdepartmental effort and community partnerships; therefore, oversight is needed to monitor key performance measures, report on progress, and facilitate the interpretation of plan elements whenever necessary. Without accountability, it is likely that inadvertent waste or loss will occur**. The creation of a formal interdepartmental working team or citizen steering committee is recommended.** As with most cities meeting Tree City USA requirements, a designated 'forestry team' provides the leadership required to accomplish the plan goals, the annual work plan and fulfill the Tree Board requirement for maintaining this national recognition.

4.8 Monitoring and Revisions

The benefit of an over-arching strategy is that day-to-day operations can be associated with achieving long range goals. To ensure City efforts continually support the long range goals of the plan, periodic revisions need to occur. Each year, the plan will be reviewed to determine or reassess operational and management priorities (Figure 1). During this review, an urban forestry performance report will be drafted and appended to the strategic plan document as a performance update for urban forestry. This plan document can then be utilized and referenced for departmental work programs, Tree City USA reporting, and grant applications. When unsuccessful in accomplishing goals, further explanation is warranted along with adaptive strategies that may include establishing new annual priorities and objectives.

As previously stated, this plan provides specific actions to be undertaken in the first five year cycle (2013–2018). The City recognizes this plan as adaptive and dynamic and as such it is unreasonable to forecast how management priorities will shift over time. For this reason, every five-year interval (2018, 2023, and 2028) is marked for a periodic review to adjust for changing community priorities, resources and other unanticipated factors. This is another strategy to ensure that this plan will remain relevant to urban forest management in Kirkland regardless of the changes that may take place over time.

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Appendix A: Performance Measures

The following tables, adapted from Clark, et al, were used as a guide for the gap analysis and development of subsequent performance indicators and goals at the City.

City Opportunity	Criteria	Performance Indicators			
		Low	Moderate	Good	Optimal
High Resolution assessments of the existing and potential canopy cover for the entire community	Canopy cover inventory	No inventory	Visual assessment.	Sampling of tree cover using aerial photographs or satellite imagery	Sampling of tree cover using aerial photographs or satellite imagery included in Citywide GIS
Achieve climate-appropriate degree of tree cover community-wide	Existing Canopy Cover	The existing canopy cover equals 0%-25% of the potential	The existing canopy cover equals 25%-50% of the potential	The existing canopy cover equals 50%-75% of the potential	The existing canopy cover equals 75%-100% of the potential
Complete inventory of the tree resource to direct its management, including age distribution, species mix, tree condition and risk assessment	Tree Inventory	No inventory	Complete or sample-based inventory of publicly owned trees	Complete inventory of publicly owned trees and sample-based inventory of privately-owned trees	Complete inventory of publicly owned trees and sample-based inventory of privately owned trees including Citywide GIS
Provide for uneven aged distribution of trees throughout the City and at the neighborhood level	Age Distribution of trees in the community	Any relative DBH class (RDBH) represents more than 75% of the tree population	Any relative DBH class (RDBH) represents between 50% and 75% of the tree population	No RDBH class represents more than 50% of the tree population	25% of the tree population is in each of the four RDBH classes
Establish a tree population suitable for the urban environment and adapted to the	Species suitability	Less than 50% of the trees are of species considered	50% to 75% of trees are of species considered suitable for the area	More than 75% of trees are of species considered suitable for the area	All trees are of species considered suitable for the area.

City Opportunity	Criteria	Performance Indicators			
		Low	Moderate	Good	Optimal
regional environment		suitable for the area			
Establish a genetically diverse tree population Citywide as well as at the neighborhood level	Species Distribution	Fewer than five species dominate the entire tree population	No species represents more the 20% of the entire tree population Citywide	No species represents more than 10% of the entire tree population Citywide	No species represents more than 10% of the entire tree population at the neighborhood level.
Detailed understanding of the condition and risk potential of all publicly-owned trees	Condition of publicly owned trees (trees managed intensively)	No tree maintenance or risk assessment. Request based/reactive system. The condition of the urban forest is unknown	Sample-based inventory indicating tree condition and risk level is in place	Complete tree inventory that includes detailed tree condition ratings	Complete tree inventory that includes detailed condition and risk ratings
Detailed understanding of the ecological structure and function of all publicly-owned natural areas	Publicly owned natural area trees managed extensively	No information about publicly owned natural areas	Publicly owned natural areas identified in a "natural areas survey" or similar document	The level and type of public use in publicly owned natural areas is documented.	The ecological structure and function of all publicly owned natural areas are documented in the Citywide GIS.
Preservation and enhancement of local natural biodiversity	Native Vegetation	No program of integration	Voluntary use of native species on publicly and privately-owned lands; invasive species are recognized	The use of native species is encouraged on a project-appropriate basis in both intensively and extensively managed areas; invasive species are recognized and their use discouraged	The use of native species is required on a project-appropriate basis in both intensively and extensively managed areas; invasive species are recognized and prohibited.
Develop and implement a comprehensive urban forest management plan for private and public property	Citywide management plan	No Plan	Existing plan limited in scope and implementation	Comprehensive plan for publicly owned intensively-managed forest resources are accepted and implemented	Strategic multi-tiered plan for public and private intensively and extensively managed forest resources accepted

City Opportunity	Criteria	Performance Indicators			
		Low	Moderate	Good	Optimal
					and implements with adaptive management mechanisms
Develop and maintain adequate funding to implement Citywide urban forestry plan	Municipality-wide funding	Funding for reactive management	Funding to optimize existing urban forest	Funding to provide for net increase in urban forest benefits	Adequate private and public funding to sustain maximum urban forest benefits
Employ and train adequate staff to implement Citywide urban forest management plan	Urban forestry staffing	No Staff	No Training of existing staff	Certified arborists and professional foresters on staff with regular professional development	Multi-disciplinary team within the urban forestry unit
Urban forest renewal is ensured through a comprehensive tree establishment program driven by canopy cover, species diversity and species distribution objectives	Tree establishment planning and implementation	Tree establishment is ad hoc	Tree establishment occurs on an annual basis	Tree establishment is directed by needs derived from an inventory	Tree establishment is directed by needs derived from a tree inventory and is sufficient to meet canopy cover objectives
All publicly owned trees are planted in habitats that will maximize current and future benefits for the site	Tree Habitat suitability	Trees planted without consideration of site conditions	Tree species are considered in planting selection	Community-wide guidelines are in place for the improvement of planting sites and the selection of suitable species	All trees planted in sites with adequate soil quality and quantity, and growing space to achieve their genetic potential.
Ensure all City departments cooperate with common goals and objectives	Interdepartmental Cooperation	Conflicting goals among departments or agencies	Common goals but little or no cooperation among departments and/or agencies.	Informal teams among departments and or agencies are functioning and implementing common goals on a project-specific basis	Municipal policy implemented by formal interdepartmental/interagency working teams on all municipal projects
Large private landholders embrace Citywide goals and objectives through	Involvement of large private and institutional land	Ignorance of issues.	Educational materials and advice available to	Clear goals for tree resource by landholders, incentives for preservation	Landholders develop comprehensive tree management plans

City Opportunity	Criteria	Performance Indicators			
		Low	Moderate	Good	Optimal
specific resource management plans	holders		landholders	of private trees.	(including funding)
The green industry operates with high professional standards and commits to Citywide goals and objectives	Green industry cooperation	No cooperation among segments of the green industry. No adherence to industry standards.	General cooperation among nurseries, tree care companies, etc.	Specific cooperative arrangements, such as purchase certificates for "right tree in right place"	Shared vision and goals including the use of professional standards.
At the neighborhood level, citizens understand and cooperate in urban forest management	Neighborhood action	No Action	Isolated or limited number of active groups	Citywide coverage and interaction	All neighborhoods organized and cooperating.
All constituencies in the community interact for the benefit of the urban forest	Citizen-municipality-business interaction	Conflicting goals among constituencies.	No interaction among constituencies	Informal and/or general cooperation	Formal interaction, such as a tree board with staff coordination.
The general public understands the role of the urban forest	General awareness of trees as a community resource	Trees seen as a problem, a drain on budgets	Trees seen as important to the community	Trees acknowledged as providing social and economic services	Urban forest recognized as vital to the community's environmental, social and economic well-being
Provide for cooperation and interaction among neighboring communities and regional groups	Regional cooperation	Communities cooperate independently	Communities share similar policy vehicles	Regional planning is in effect	Regional planning, coordination, and/or management plans
Develop tree protection ordinances that support municipal policies and are consistent with the community vision	No codes	Limited land use tree protection	Land use and public tree protection		Tree removal limits and requirements that on private property, protection of public trees, that's enforced

Appendix B: Forterra Report

(Placeholder, awaiting completion
of focus group meetings)

Appendix C: Survey Results

The following represent the summary results of the Urban Forestry Management Plan online survey. At the close of the survey on September 14, 2012, a total of 665 respondents completed the survey. All ranked responses appear in descending order.

1) What is your relationship with the City of Kirkland, do you:

72.8% Live in Kirkland
18.6% Live and Work in Kirkland
5.4% Work in Kirkland
3.2% Neither

2) What neighborhood do you live in?

18.6% Finn Hill
10.5% North Rose Hill
10.4% Other (please specify)
8.4% North Juanita
7.8% South Juanita
7.3% Central Houghton
6.9% Norkirk
6.1% Bridle Trails
5.2% Kingsgate (Evergreen Hill)
5.2% Market
3.7% Highlands
2.9% Moss Bay
2.3% Everest
1.8% Totem Lake
1.7% None
1.4% Lakeview

Comments:

1	11506 NE 113th Pl. 98033
2	Bellevue
3	Close to 132nd Square Park, south of Kingsgate
4	Denny Plateau, between Juanita Dr and Holmes Pt drive.
5	Downtown
	Downtown
6	Edmonds
7	Enatai
8	Finn Hill
	Finn hill
	Finn Hill
9	Firloch near Kingsgate
10	Goat Hill
11	Holmes Point
	Holmes Point
	Holmes Point
	Holmes Point
	Holmes Point
	Holmes Pt
12	Houghton
13	Juanita - I don't know north and south
14	Lake Forest Park
15	Mercer Island
16	Mill Creek
17	Mukilteo
18	Ne70th and 126th Ave
19	North Rose Hill
20	Norway Hill
21	Not Kirkland
22	Other (please specify)
23	Point on Yarrow Bay
24	Redmond Microsoft area
25	Ridgecrest
26	Rocky Point Heights Camano Island, WA 98282
27	Shoreline
28	So Rose Hill
	South Rose Hill
	South Rose Hill
	South Rose Hill
	South Rose Hill
	South Rose Hill
	South Rose Hill
	South Rose Hill
	South Rose Hill
	South Rose Hill
	South Rose Hill
	South Rose Hill
	South Rose Hill
	South Rose Hill
	South Rose Hill
	South Rose Hill
	South Rose Hill
	South Rose Hill
	South Rose Hill
	South Rose Hill
	South Rose Hill (thanks for remembering us)
	South Rosehill
	Springbrook Square
29	Totem Lake
30	Very near to Bridle Trails
31	Wallingford
32	West of Market
33	West of Market
	West Seattle
34	Woodinville
35	Work at Yarrow Bay

3) How would you rate your knowledge about trees?

68.0% Some
25.7% Extensive
3.6% None
2.7% Professional

4) Can you identify by name the trees near your home?

66.6% Some of them
29.6% All of them
3.8% None of them

5) Kirkland's Urban forest's consists of:

82.5% All of the above (below)
19.7% The native forest areas all over
19.6% Trees in formally-landscaped parks
19.1% Street trees or trees located along the road and the public right-of-way
14.0% The trees in my neighbor's yard
6.7% I'm not sure

6) Understanding which benefits are most appreciated by residents can help guide long-term management strategies. Please rate the following benefits according to their importance, with 1 being the most important and 5 being the least important.

	Rating Average	Most Important
Provide habitats for birds, animals, and fish	**1.57**	**64%**
Reduce erosion and stabilize hillsides	1.58	62%
Protect water quality and reduce stormwater runoff and flooding	1.61	61%
Other	1.66	53%
Carbon reduction or sequestration	1.96	50%
Filter air pollutants and reduce vehicle emissions	1.87	50%
Help define city character and make it a desirable or more livable place	1.95	43%
Improve human health and provide social benefits	2.06	41%
Save energy by cooling homes and neighborhoods	2.17	38%
Provide shade	2.36	26%
Increase property values	2.51	25%
Enhance the shopping experience in business districts	2.91	14%

Comments:

1 A place for kids to learn to climb trees.
Recreation
A trees provide a place for children to play and stay connected to nature
Nature connection for kids
Provide a forest for kids to play in and others to use for trail runs and/or biking
2 Absorb traffic noise, enhance local environmental awareness and appreciation especially fragrance, wind sound, weather, season, and biological dynamics, e.g., leafing, bird and wildlife behavior and changes, leaf mulch, fruit, etc.,
Buffer Freeway noise
Buffer noise, create a sense of privacy
Noise reduction
Add character to mono-cultured landscaping trends
Trees and landscaping reduce visual impacts of urban development
Reduce traffic noise, provide visual buffer for roads
3 The impact on water views must be considered

Get rid of view blocking trees, trim, or top. The views of Kirkland are what make it special.
Block views and lower property values. Wrong trees for the area
Block views, so property value is increased when they are useful, but a problem when they just block the view
Not too high to block views
Adds privacy from neighboring houses
Privacy
Privacy from neighbors; Don't have shades
4 Aesthetic beauty / offset asphalt & concrete
Aesthetically beautiful
Beautiful to look at
Beauty
Enhance beauty. Maintain Northwest identity. Screen undesirable parking lots, night lighting, etc.
Esthetics
Esthetics
Trees are what makes our city green and beautiful
Trees can make a yard/house look nice
Trees are beautiful!
Provide seasonal color to brighten our year
Simply beautiful to look at
5 Helps bring normalcy to our hectic city environment
Historically significant trees enhance livability
Overall quality of life
Make sidewalks/streets more walking friendly
It is why I live here, trees go - I go
Education benefits---nature field trips without leaving the city; major benefits to bees and other insects that collect pollen.
6 Establish corridors that link open space
Produce oxygen
Respect and care for nature.
Reduce the urban "heat island" effect
Shade creeks to keep temperature down
Wind breaks
7 Habitat for wildlife
Wildlife Corridors
8 Have roots that destroy houses and yards, and create the need for massive cleanup all year long
Tress can also reduce the value of the area as the water view and sidewalk safety are also important
Plant trees that are evergreens less to clean up. Cedar
9 Help improve patient recovery. they help increase the amount of time people spend in business districts and how much they spend
I have an immediate calm feeling driving through Holmes Point and N. Juanita from the forest.
Trees help us relax and enjoy the outdoors by improving the landscape-- for example; commuting down a highway lined in trees is far more pleasant than driving past monotonous concrete walls.
Trees help with our peace of mind, and help to keep peace in our relationships by absorbing negative thoughts. They help the planet hold the energy of “Light”, Love and goodwill towards ourselves and others. Every time I hear the saws cutting another tree in my neighborhood, I wince.
Trees are emotionally stabilizing - they make people happy.
10 We have something unique that international visitors can't understand why we can't appreciate and why we destroy them. I think we end up taking them for granted when we live here. The trees are very special and unique and our little area of Holmes Pointe is sacred and special to preserve.
Maintains the character of the PNW.
11 More trees more green spaces build businesses up not sprawls less asphalt parking
Must be balanced with other important needs of the community
12 Open areas around homes also provide sunshine to warm homes in winter/cool days reducing the need to run the furnace.
13 Provide food
Provide fruit
Provide fruit, nuts, and wood products
They are usually the only source of fresh, healthy foods in our urban areas.
14 Reduce crime
Reduce crime
Reduce housing congestion
15 None
Other (please specify)
Personally, I would rate all of the benefits Extremely Important, but have attempted above to segregate significance levels to give you a sense of my priorities
Question are slanted to producing a result desired by the forester
These questions are obviously all skewed to support what you want to say... All are important... At the same time allowing sunny areas and views are just as important. Planting the right tree in the right place is essential.
Stop building so many condos. This would be more effective than trees in reducing air pollution. More people=more traffic=more pollution

7) What problems do you encounter with trees? (1 Most important-5 Least Important)

	Rating Average	Major Problem
Other	**2.38**	**55%**
Sidewalks and pavement cracking	2.76	19%
Blocking traffic, sidewalks, signs and/or street lights	2.92	17%
Safety issues created from trees and limbs falling	3.06	17%
Tree roots and underground pipe problems	3.07	15%
Blocking my view	3.64	15%
Leaves and fruit dropping	3.25	11%
There aren't enough trees in my neighborhood	3.82	9%
Trees cost too much money to maintain	3.93	6%

Comments:

1 Ability to cut trees when necessary without burdensome regs
2 Again a skewed question obviously written to get anticipated results to report. Cost of trees planted by city and sidewalk repair should be borne by the city not the local homeowner.
3 All the nice old HEALTHY trees are being cut down for big box homes. Not necessary.
4 Birds "planting" English holly and laurel
5 Block sun when over planted and over grown (Red Maples)
6 Block sunlight making me depressed
7 Blocking sightline views at certain intersections
8 Blocking sun from garden
9 Blocking sunlight
10 Cause power outages when they blow down. Blot out the sun. Ugly stumps remain.
11 City does not seen to distinguish benefit of removing invasive holly as opposed to Douglas fir; only trunk diameter matters. Just look at what "trees" are selectively fenced off on development projects. City does not seem to value/understand benefits of citizen supplied solar energy, which can be combined with shorter trees, but does require removal of some older trees. "Canopy percent cover rules all" is myopic view that does not consider all sustainable land use.
12 City of Kirkland reluctant to allow removal and replacement of trees that are a nuisance or near the end of their lifespan.
13 City plants but doesn't maintain trees in their own parks
14 City regulations
15 City required trees are wrong type and destroy build infrastructure.
16 City rules and fees for cutting on private property
17 Constant property damage due to moss, pine needles, lack of sunlight and fallen tree limbs
18 Continuing loss of tree canopy
19 Cottonwood trees leave a thick carpet of white sticky blooms that cover *everything* in area, it invades our house and driveway, and is very difficult to remove. This is a nuisance.
20 Cutting and destruction of trees
21 Declining health creates safety issue but those who 'love' trees without adequate knowledge and without common sense make it almost impossible for those trying to do the right thing by replacing an ailing urban tree that we ultimately are impeded from helping promote a healthy tree canopy for the area.
22 Decreased property value by trees blocking views
23 Diseases that reduce the health and affect the appearance of trees
24 Downed branches causing power outages
25 Effects and potential problems vary per species
26 Fir needles are a pain in the back side. They make a mess every where
27 Fir needles in my gutter (sucks)
28 Fire hazard with accumulated downfall in near area; abundance of shade causing moisture problems with house
29 Growing into power lines
30 Having to seek permission to replace diseased or poor choices of varieties of trees.
31 Hazard trees that are not dealt with
32 High costs associated with Tree Ordinance requirements
33 I consider trees to be part of the "view"
34 I rake the leaves into my garden, providing habitat and food for worms and enhancing the productivity of my vegetable garden.
35 Ignored apple trees that spread codling moths
36 In appropriate trees (such as Leland cypress) planted as landscaping cause dangerous situations
37 Increased home roof maintenance
38 Invasive nonnative trees
39 Kirkland has Water; Mountain and City views I use to love driving into Kirkland on 85th and see the mountains and water view now All I see are the huge Maple trees. Nothing special about that I still love driving into downtown Edmonds for the sound view.
40 Lack of knowledge and trust of who to hire to care for my trees
41 Large trees have huge branches falling on creek and my yard. Looks like cottonwood trees over 100 feet that drop leaves, sticky covers for leaves, which is hard to get off lawn, lawn furniture, patios, deck and hot tub. The trees are in an easement that butts up against Juanita-Woodinville Rd. The creek use to have fish and frogs but nothing except branches, leaves, and lots of wild ivy that is growing up the trees. I feel it would be better to have the trees topped, trimmed and clean up the creek to return it to the original way it was. With the trees that have been planted in the middle of Juanita-Woodinville Road, it makes impossible to trim those trees unless the road is closed as there is only 2 lanes. The trees in the middle of the road have grown so much that it is hard to see clear ahead to the crosswalks and there have been accidents due to the low visibility. Trees are great. They are a great buffer for noise, home to many birds, clean the carbon in the air, pretty to look at and provide shade but they are hard to deal with when they get so big you can't do anything.

42	Leaves are a problem not fruit.
43	Many of these questions are irrelevant to trees on public lands. Trees on private property should not be subject to government control
44	More trees needed
45	Most ROW widths are not sufficient for street trees. Shoehorned trees conflict with more important ROW uses and become harmful.
46	My neighbors have large trees on their property and they don't take the time or spent the money to care for them properly so I fear their tree could fall on my house.
47	Need to get permits and $$$ to remove problem trees. They are pretty in the summer (cottonwood and poplar), but they are a massive problem.
48	Needles clog gutters and storm drains.
49	Neighbors cutting down trees that provide shade or privacy for my yard.
50	Neighbors cutting down trees thoughtlessly or without a permit
51	Neighbors cutting too many trees
52	Neighbors intent on cutting down vast majority of trees on their property, thereby reducing Kirkland green cover
53	Neighbor's trees blocking solar panels
54	New home construction does not do enough to protect trees. Many are removed and more disturbing, many die post construction
55	None
56	Non-native trees can be very invasive!
57	Not allowed to cut trees down
58	Not enough clusters of trees for wildlife habitat due to in-building
59	Not maintained.....pin oaks are nasty all around
60	Nothing else
61	Old trees need to be removed/maintained
62	Other (please specify)
63	Overhang blocks sunlight for garden and solar panels
64	People clear-cutting property for development
65	People don't know how to prune trees properly, and that includes utility workers.
66	Pollen and sap dirties up my car
67	Poor pruning practice from others on street trees
68	Power outage due to limbs falling
69	Provides haven for crime
70	Recently eight (8) old Douglas Firs were ripped out by a construction next to our property. I objected to this because the demolition workers had not yet submitted to the city to remove these trees. They used an excavator to slash the trees down which was an extremely dangerous practice within 9 feet of my house. I do though object to neighbors planting fast growing trees as fencing and which they allow to grow 40 or 50 feet obscuring a diminishing view of the lake and which reduces the value of homes above the offending house. If the city has code that states you cannot erect a fence more than 6 1/2 feet, then the city should have the same code for trees that are being used for no other reason but as fencing.
71	Removal of sick trees in areas city and parks dept are responsible for
72	Restrictions on tree maintenance and trimming/topping - Big but not Major problem
73	Restricts residence construction
74	Ridiculous ordinances that prohibit property use
75	Should be tree/hedge height limit in view areas
76	Some "protected" views aren't being protected.
77	Some trees drip sticky substances that damage cars
78	Strict city rules about trees that aren't well understood by the neighbors
79	Tall trees with large canopies block light entering our homes, are huge safety concerns, and prevents grass from growing in our yard. Lack of useable yard due to too many and too large of trees lowers my property value.
80	The City of Kirkland is preoccupied with trees. We need to focus on reducing traffic congestion and limit building of new condos
81	The city spends too many resources to keep trees that should be removed or replaced, many times to the detriment of the homeowner
82	The city takes down more trees than the neighbors.
83	The power company butchers the trees because of the lines
84	The small inconveniences caused by trees are minor compared to the very large problems caused by the trees being taken down. There was an old, large, gorgeous tree in the front yard of someone's house near my house. It was an unusually beautiful tree. The owner of the tree had it cut to the ground recently - exposing a very ugly house. The large old trees should not be at the mercy of the ignorant person who owns the property
85	The trees are disappearing continually.
86	The trees behind my house are a problem! They are too tall
87	There are TOO MANY trees in our neighborhood
88	There aren't enough NATIVE trees in Kirkland
89	They can get too big for the property/surroundings, and one they do it's hard to deal with (especially if you're prohibited from cutting them down).
90	Too close to houses so increase fire risk
91	Too many Cotton Woods allowed to stand and remain. One of the biggest culprits is the City of Kirkland and all the Cotton Woods allowed to stand along the shores of Lake Washington near Juanita Beach Park and trail.
92	Too many large ones cut to open for development or "better landscaping" and not taking into consideration what might happen if the support trees are removed. Seen too many firs standing alone in someone's yard, waiting to fall in the next storm.
93	Too many large windbreak trees have been removed; now my street experiences very strong winds.
94	Too many non-native trees (e.g., English Laurel)
95	Too many trees are being cut down by developers, AND the beautiful old trees on Kirkland Ave are being cut down because they don't meet the current sidewalk code. What a terrible decision. Those trees are priceless and have been in Kirkland longer than many human residents. I am disappointed that the city couldn't find another solution to level the sidewalk.
96	Too much city time and money spent on this non problem
97	Too much shade reduces sun and solar warming of homes
98	Too much shade, moss damage to roof
99	Tree fall during wind storms does knock out power.
100	Trees *ARE* the view

101 Trees are the view. Don't be so arrogant and self-absorbed.
102 Trees are too close to the house - should be able to remove them.
103 Trees blocking view of cross traffic at driveways as well as street corners
104 Trees do cause some maintenance issues but it's worth it
105 Trees do cost money, so we must be realistic and practical
106 Trees overhang into the road and on power lines this is a major problem, with a simple fix.
107 Views should be protected too
108 Watching some Kirkland trees being removed
109 We are required to maintain trees in the strip along our sidewalk, yet we have no rights to trim them which is not fair.
110 We keep cutting them down in mill creek to make way for new homes. We're losing our natural forests here
111 When the City requires developers to plant street trees, it needs to specify trees that are NOT shallow-rooted and that WILL BE of an appropriate scale in 20 years or more.
112 Wrong kinds of trees...e.g. Cottonwoods
113 Wrong types of trees planted in sidewalks and near buildings

8) To your knowledge, who is supposed to care for trees that are located in front of your property between the street and sidewalk?

47.7% Me: the adjacent property owner
29.1% I'm not sure
23.2% The City's tree crews

9) Do you think the City's tree protection ordinance is:

27.3% I'm not aware of the ordinance enough to say
24.3% Too strict - you can't even remove trees on your own property!
15.4% Too lax - It's sad how many tree are getting cut down everywhere
13.5% Just right - Kirkland has actually increased its canopy coverage
12.5% Confusing - It's not clear what is allowed and what's not
7.1% Other (please specify)

10) Overall, which statement represents your sentiments regarding the condition of trees? (1 Most important-5 Least Important)

	Rating Average	Trees look great!
Trees in forested areas in parks	**1.62**	**47%**
Trees in formally-landscaped parks	1.64	43%
Trees in the right-of-way (along streets)	2.05	20%

Comments:

1 After car accidents street trees that were eliminated/destroyed are rarely replaced
2 Along Market Street median trees need to be trimmed. There are many dead limbs.
3 Always wonder what markings and ribbon mean on some of the trees in the woods
4 Block view of traffic. Icy streets slow to melt because they are shaded.
5 Bridle Trails park is an absolute gem.
6 Carillon Woods needs to have fewer trees in the children's play area vicinity for safety, visibility and warmth.
7 City should focus on basic services, not trees
8 Cottonwoods should be removed and replaced with desirable trees
9 Dead trees all over the place that no one seems to be responsible for; that goes for severe pruning needed.
10 Do general a question if it pertains to existing. Right of ways vary all over the city.
11 Don't know
12 Don't use these parks.
13 Established trees are being cut down at an alarming rate, especially during new home construction because the fines are too low to discourage clear cutting. Spindly saplings take decades to mature. Some trees can live hundreds of years. We need laws that protect our grandchildren's natural tree heritage.
14 Existing large trees in most rows need to be removed.
15 Greenbelt area trees are safety issue with windstorms.
16 I cannot respond because I am unsure
17 I don't live in a neighborhood that has a public right-of-way
18 I feel strongly that government should have no right to dictate the use of plantings on private property unless it presents a public safety issue
19 I know we are working on the forest trees so I put generally satisfied to keep supporting that work
20 I live on the greenbelt and there are dead trees that should be thinned. One fell onto my house years ago.
21 I think our trees seem to be healthy, but I wish we were doing more to replace the old growth trees that periodically get cut down.
22 I think there should be more limits to which kind of trees can be planted as street trees next to sidewalks.
23 I think trees and other landscaping are incredibly important to the overall feel and appearance of a community.
24 I would like more street trees and a way for neighbors to coordinate street tree planning/planting on their street.
25 I would like to see concern for the trees be a high priority over convenience of people. The cherry trees along 130th could use some attention. They need to have the ivy pulled off them.

26	I'd love to see power lines go underground which would allow our trees to grow naturally and continually get topped.
27	It's not the condition of trees; it's the cutting of trees. We are obsessed with controlling things. I moved here because of the firs and cedars and we keep cutting them and replacing them with maples.
28	Kirkland needs to do landscaping and plant trees along 124th ave in Kingsgate. Not nearly enough landscaping is done there.
29	Lack information. Requires both a case-by-case and a general perspective, intelligence, management response(s)
30	Looking forward to trees along 85th St. Rose Hill
31	Many have overgrown their living spaces, damaged sidewalks, blocked views. They need to be replaced with less invasive types of trees or even shrubs
32	Many trees in the Kirkland streets cover signs and street name, this is not ok. The city should maintain these trees.
33	More trees please in parks - especially natives. Please replace trees when they fall.
34	Most residents will agree that views of the city and lake are more important than trees
35	Need more trees spread out in parks, e.g. Peter Kirk Park, etc.
36	Need to deal with sidewalk damage and eradicate the ivy that damages trees in some forested areas.
37	Not enough diversity.
38	Noticing some serious invasive english ivy on some large trees. Doesn't ivy usually kill the tree eventually? If so, seems like a hazard down the road. Earth Corps and other orgs often organize work parties to do invasive removal . . . .
39	Oak trees never should have been planted. Too dirty and leaves cause problems.
40	Obviously budget restraints in Kirkland limit the amount of time given to maintaining the trees. There is room for improvement. Also I think there are zones between jurisdictions (like the edges of parks next to roads) where the trees are not well maintained because (I'm guessing) that neither the parks dept or the public works department knows who is responsible. (Along Forbes Creek drive is an example)
41	One of reasons we bought a house here was because of the trees, both on our lot and in our surrounding forests.
42	Other (please specify)
43	Owners of properties should have the right to remove their own trees.
44	Parks ok, street and right of way totally out of control, forested areas?? Ok if old growth only. No crowding.
45	Pay maintenance workers; employ fewer city planners.
46	PSE make a point of butchering our street trees, we should require them to do a better job. The pruning they perform cheats our community.
47	Question wisdom of planting true firs on beach at Juanita Beach Park. Why use more native species in public parks.
48	ROW trees are in bad need of pruning away from the container trucks that damage the limbs and for the health of the tree.
49	Seems to make more sense to plant dwarf trees under utility lines, rather than fighting a losing battle with topping them.
50	Should use more native species maybe shrubs along with trees
51	Some forested areas on Finn Hill need restoration
52	Some of the trees are a driving hazard when they have grown so big they are hard to see around when close to intersections for pedestrian and bike riders.
53	Spotty--some are fine, some are not well cared for--again, who cares for those?
54	Street tree appearance is compromised by pruning for power lines. Push under grounding!
55	The City Arborist should be made available at no cost to evaluate the health of street trees that the property owner has concerns regarding
56	The City should not be creating easements for trees on private property. That right should lie soley with property owners.
57	There are many dangerous, untrimmed trees and poorly trimmed "preserved" trees in our city, particularly under utility wires. These trees should be allowed to be removed (even at personal homeowner expense). Why should we be preserving trees (trimmed like unhealthy mangled shrubs)? These mangled "trees" are actually publicly shameful (!) Examples of our professed love of trees as a "tree city." City should allow and perhaps even promote private homeowner paid removal of these ugly eyesores.
58	There are plenty of places for trees that do no block residences' views.
59	There are too many fast-growing trees planted too close together and they block views, block sunlight and crack pavement.
60	There should be serious penalties for persons/entities who plant potentially tall trees directly under utility lines.
61	Too many forests are being ruined to put in neighborhoods
62	Too much ivy killing trees
63	Tree planning should consider a very long term plan so the trees will be able to age.
64	Trees are allowed to grow too close to power lines along streets resulting in severe power outages throughout communities at a high cost
65	Trees are often overgrown with Himalayan blackberry & ivy
66	Trees by my house look terrible- they are not trimmed
67	Trees generally look like they're butchered!
68	Trees in Parks: YES! Trees in Right of Ways: Yes! Trees on Private Property: Give the owner a break!
69	Trees near traffic signs are not being taken care of
70	Trees on private property are very important since that's the largest area
71	Unfortunately a lot of trees at Juanita Bay Park are at the end of their life cycle and are deteriorating.
72	Very unsatisfied with decision to cut down trees on Kirkland Ave and possibly other areas I'm not aware of. Find another solution to level sidewalks! Don't sacrifice the trees. It seems very hypocritical to say the city has a tree protection policy and acts like it cares with these surveys and then will cut down important, established trees.
73	We have a long way to go in terms of invasives education and reduction in our green spaces.
74	We have sidewalk heaving on 84th Avenue NE and plants growing into the sidewalk, also obstructing views of street signs.
75	We should have more NATIVE trees along streets, in green belts, in parking lots, etc.
76	We should try to keep mature trees, rather than removing them and replacing with small species.
77	When the trees block or partially block sign this is a problem.
78	Where our parks contain views, the irreplaceable and valuable views contribute to tourism and higher property tax dollars collected. Trees in these areas need to be carefully selected so as to maintain this economic benefit to Kirkland (plus the benefit where citizens and visitors feel there enjoyment of the area is enhanced by the water views, the Views of Seattle and the views of the Olympics.
79	Where they block cross walks, lighting and driver vision, the trees should be trimmed or removed.
80	Would like to see more natives in right of way, parks and in new developments. I usually see small non-native maples and other "Junk" or cheap Home Depot style trees used, especially in new housing.
81	You don't keep right of ways and intersections safe because you don't trim trees in and around intersections-you're asking for problems.

11) Overall, do you feel the City is planting enough PUBLIC trees?

34.3% Enough
33.5% Not enough
22.8% I'm not sure
9.4% Too much tree planting

12) What ways of encouraging PUBLIC tree protection, planting, and maintenance would you favor?

	Rating Average	Most support
Other	**2.00**	**67%**
Education to increase awareness of the benefits of trees	2.21	39%
Neighborhood volunteer tree planting	2.27	32%
Dedicated funding for City tree crews to plant, prune, and remove public trees	2.28	38%
Incentive programs to encourage citizen tree planting in parks and planting strips	2.33	35%

Comments:

1 A program to help neighborhoods understand what trees they CAN plant in common areas.
2 All the above costs money - Kirkland can't afford
3 Allow an Association to remove trees that are too big.
4 Allowing public to remove nuisance trees
5 Annual expert assessment of trees to be removed (city removes them making wood available to public), and where some should be planted by volunteers
6 At this time of dwindling resources, tax payer funding for tree planting and maintenance is a non-priority. When the economy improves, then the city can indulge in stuff like this.
7 Boy Scout tree planing
8 Bring in an organization like Friends of Trees
9 Budget shortfall DOES NOT ALLOW
10 Buy trees for residents to plan
11 Caring for the trees is great but I do not want to see them cut down!
12 Citizen science based reporting
13 City maintaining trees of neighbors that are hanging over roadways
14 City should focus on basic services, not trees
15 City should have a more balanced approach to trees and vegetation. If trees are planted then resources need to be made available BEFORE they go in so that the expense doesn't fall on the homeowner or they go unattended to like many of the green spaces have.
16 Community partnership with city
17 Dedicated funding to maintain the trees would improve the health of the canopy and provide consistent maintenance to avoid limb breakage and tree falls
18 Definitely protection for the existing old cedars and other old trees
19 Don't spend any more money trying to educate the public, put money in places that are better spent for the community. I these economic times don't stress trees and such.
20 Easy ways to call in illegal cutting by developers
21 Educate neighbors to plant appropriate trees in appropriate locations!
22 Educate public about pruning, removal--regulations, best practices
23 Eliminate tree ordinance to reduce cost of maintaining trees
24 Focus on reducing traffic congestion. This should be the priority.
25 For Developers, INSTEAD of requiring them to save trees on lots where they may not be wanted, have them pay into a fund for planting trees in parks or other green belt areas.
26 Generally people buy the biggest, cheapest tree they can and the result is something too tall and too big for the space after about 10 years.
27 Get the word out -- we need volunteers to remove trees overgrown with invasive species
28 Have a plan and people gift prized specimen trees instead of benches. And remove the overgrown dirty ones.y owners and
29 Home owner incentive to cut or remove problem trees.
30 How can one be supportive of both planting and removing public trees? Very confusing.
31 I am so discouraged having fought for SDOs and they have absolutely no consequences. A beautiful old tree that eagles sat in was cut and sold to a logging company. It managed to squeak by and I feel absolutely helpless to stop it.
32 I do not know if you have laws to protect the trees in planting strips that the city planted. Either way, do not allow people like my neighbor to remove planting strip trees.
33 I think the plan has to be by neighborhood. More trees in areas w/ out view opportunities, less in areas with property values tied to views. One size does not fit all.
34 I would be very pleased if all public schools had a naturalist, someone who specialized in teaching children about nature and how it is important.
35 I would encourage tree maintenance
36 I'd like to have more public trees, but I know $ is tight.

37 Impact fee on new development, where appropriate
38 Incentive vouchers for saplings of appropriate trees given out to those who would be willing to adopt a tree.
39 Include trees in any new development, e.g. the Houghton Business District. Get an Olmsted book.
40 Just make it easy for us to do it - organize events and the smaller the tree that's planted, the more successful it will grow.
41 Kenmore recently planted the Blue trees along 525, and tree sweaters draw attention. Kirkland could come up with their own AborArtum
42 Less building, more trees
43 Let's get rid of damaged dying trees and prune existing trees large shrubs before we plant too many more. Only spend money on keeping them safe and tidy. People can donate extra to plant new trees. People can memorialize loved ones with tree dedications.
44 Maintain trees so branches don't break off
45 Many urban tree programs are co-opted by tree cutting contractors and tree farms anxious to sell starter trees. I'd prefer a citizen-run volunteer program dedicated to preservation. Kirkland needs a proper legal mechanism for citizen-initiated land marking of trees.
46 Meaningful penalties for topping trees
47 More flexibility in owners' maintaining own trees
48 Neighborhood level planning so that the rules apply to the needs & priorities of the neighborhood
49 Neighborhood volunteer tree maintenance.
50 No view blocking trees!
51 None of governments business to dictate to private land owners when most of the cities beautification looks in shabby shape. Clean your own house before pointing the finger at others.
52 Notify all Kirkland residents that they need to take care of trees in parking strip
53 Once educated, soften your strictness about pruning and replacing right of way and boulevard trees.
54 Other (please specify)
55 Planting strip tress that have huge root systems are not an improvement. Maple trees, Cedar trees and Cottonwoods need to be band as they clog gutters and drop debris all year long.
56 Protect what we have, especially in annexation areas
57 Public awareness of the benefits of trees is important and I feel a voluntary citizen involvement much like that in some of the parks would be beneficial and helpful to keeping our PUBLIC trees planted and maintained would be a welcome opportunity and help contain public costs.
58 Public instruction on how to care for trees, as well as selecting trees and locations for planting. (Perhaps a partnership with the schools? Or an online class? Perhaps completing the class would allow the person to earn a badge on a social network such as Facebook or Google+.)
59 Purchase easements for City trees to be planted on private property abutting streets, 1/2 the canopy diameter off the CL of the sidewalk.
60 Re-prioritize spending to maintain/replace what we have
61 Require new developments to plant trees and keep existing ones when possible
62 Require trees planted on rooftops of businesses.
63 Rules that if you can't care for the trees, don't plant them!
64 School curriculum projects to engage family, neighbor, neighborhood, youth and senior engagement
65 Shrubs and ground cover also
66 Some trees just have to come down. Especially when then are too close to a house.
67 STOP CUTTING TREES ALONG CITY STREETS!
68 Stricter tree policy. I've seen groves of established trees wiped out for new housing development with small ornamental trees and bushes planted here and there to replace them. It does not replace what was lost. The city needs to be held accountable for trees cut on/near sidewalks.
69 Support City knowledgeable crew to plant native trees which are drought-tolerant, pest-resistant, right height for visibility (so don't have to come back and prune); support biodiversity so we don't lose a bunch of the same trees to climate change, pest.
70 The City needs to stop planting trees in the middle of sidewalks. The City needs to maintain their public trees the same way they ask private home owners to maintain those in right of ways.
71 The City provided saplings that we planted on Peter Kirk property. The school and PTSA had no budget for those trees. Volunteers did the work. Seems like a good partnership.
72 The general public are not interested in trees unless it affects their property or right of way.
73 There are more important issues than trees, let's keep trees in perspective with our other responsibilities
74 There are plenty of trees in Kirkland - use public money and staff time to reduce development costs and repair infrastructure.
75 Tougher restrictions on cutting down old healthy trees
76 Tree sponsorships, like benches, in honor or memory of someone
77 Trees along 124th Ave in Kingsgate. Helps to also beautify an ugly street due to massive power lines
78 Unsure what else is required
79 Volunteer planting in public areas should include city governance.
80 We are big on dedicating benches in parks to individuals, how about tree dedications?
81 You are mixing issues and teeing up the idea of tree planting in public parks. Good idea if done without blocking views. That can be accomplished.
82 Zoning Rules for Shopping and Assembly Uses

13) For PUBLIC tree protection, planting, and maintenance programs, which of the following reflects your views?

41.9% I'd be willing to pay a little bit more for these programs
22.3% I'm not willing to pay any more
15.8% I don't have enough information to answer the question
9.9% I'd be willing to pay much more for these programs
6.1% I think we should spend less on these programs
4.1% I don't think we should spend anything on these programs

14) How should the City encourage PRIVATE tree protection and planting?

	Rating Average	Most Support
Other	**1.83**	**69%**
Education to increase awareness of the benefits of trees	2.13	45%
Incentive programs to encourage tree planting on private property	2.24	44%
City ordinance changes	2.9	26%

Comments:

1 Allow interested landowners to plant orchards within the City.
2 Allow owners to cut too large trees if they replace with decent-sized new slower growing ones.
3 Allow property owners to be stewards of their own trees.
4 Allow trees to be planted on private property abutting streets, 1/2 the canopy diameter off the CL of the sidewalk.
5 Also continuous laurel hedges should be trim down to 6 ft to show more tree linese di
6 Are commercial landscaping regulations adequate? Developers should have to improve the greenery when they build.
7 Better enforcement of existing ordinance
8 By forcing density (too many houses on too small lots), we are also pushing the trees out. No one wants a tree towering over a structure as it is asking for trouble (everything from falling branches, masses of leaves clogging gutters, to severe structural failure). We have a massive oak tree that was planted in 1964 too close to our house and it will unfortunately have to go later this year. It is a majestic tree, an asset for the city, but in being too close to the house, the risk in retaining it is just too great.
9 Change city policies. Change apparently inflexible tree rules to allow for reasonable tree removal and replacement. Removal of invasive holly should be encouraged, especially when there are plans to replace with other species. Planned solar installations that include tree replacement should be encouraged.
10 City should focus on basic services, not trees
11 Clarity on the laws. Example: If I plant a tree, am I disallowed from removing it in 10 years without a permit?
12 Discourage mega mansions like the remodel on Waverly.
13 Do more to make homeowners aware of regulations governing tree maintenance and removal on private property.
14 Do the procuring and organizing for us. Work with scouts, schools, and other civic groups.
15 Don't allow developers to cut so many trees down or plant so close to the property line (so as to impact the neighbors)
16 Don't know enough about ordinances to comment
17 Don't know ordinances
18 Don't mess with the citizen's rights to do what they wish with their property
19 Don't spend the money on this; there are more important things to spend money on. I love trees, I have trees, but if I have a sick tree I don't want to have to pay for the city to come and tell me it is sick before I cut it down. Too much legislation, too much Gov. looking over our shoulders.
20 Double-down on Arbor day.
21 Educate on type of trees that do not cause problems and damage to property.
22 Educate the public on beneficial genera/species that are appropriate to the space in height, width, cultural requirements and disease resistance.
23 Educating the general public on the benefits of trees would be a waste of money during this poor economy.
24 Encourage people to do less cement and pavement, clean storm drains and rain gardens
25 Encourage residences to top, prune hack off view blocking trees!
26 Enforce the city ordinances.
27 First stop the removal of common public assets
28 Fliers listing great cultivars for residential use mailed out.
29 Have a tree "exchange" - if one gets cut down, another gets planted
30 Help people maintain healthy trees on their property
31 I and my neighbors were thrilled to get a Backyard Wildlife Sanctuary designation and sign
32 I don't know what City currently does nor what is most effective, to comment.
33 I feel the future of Kirkland's aesthetics when it comes to trees will probably come more from land use ordinance and insuring that the city owns enough land to maintain a long term plan. Otherwise land will be developed without regard to overall public enjoyment.
34 I need more information
35 I need to read the existing ordinance to be better informed.
36 I think we have more than enough trees, especially in my area; I'd like to be able to remove some
37 I'm not sure what the city ordinance would be? Something like mandating more trees would not be good. Offering prime species of trees at a discounted price would be good. Also ordinances that encouraged the elimination of problem species if they are replaces by prime species would be good policy as well.
38 In addition to huge fines for healthy tree removal and penalties for falsifying disease reports, you need to reach out with pro-tree education -- on TV/radio/online, in public schools, at local nurseries, etc.
39 Incentive program should provide the appropriate size and species of NATIVE trees for the appropriate space
40 Incentive programs to encourage proper care of private trees to discourage cutting them down
41 Incentives and education for planting NATIVE trees
42 It is one of my biggest values and a reason I live here.
43 It's important to save existing trees, though it's also important for neighbors to understand or the city to promote a "good neighbor program, wherein folks can become more mindful about blocking neighbors views and/or taking care of their own trees growing into other properties.
44 It's not the city's job to tell private citizens how to landscape their private property.
45 Let me cut more trees down, when the initial planter did something stupid like put the wrong tree in (40ft tree next to house)
46 Like I said earlier. If people can purchase trees and plant them with city approval to plant in public spaces in order to memorialize their loved ones, I think people will care for that area more. This is all privately funded and can get city planning approval to make sure plantings are happening in the best areas. We have several dead or dying trees in our greenbelt area. One went down in the

last major windstorm. Other trees have been damaged from that storm and are dying. They are a hazard to the homes. We have had a neighbor who had a tree fall on their house from another neighboring greenbelt because they do not get wind sail pruning. We love our greenbelts but need direction on how these trees can get some attention since they are on city property.
47 Limit tree height/width to prevent property damage to others
48 Lot size - with big house on small lot tree become a nuisance and a danger
49 Make it easier to cut a wrong tree and plant a right tree
50 Make it easier to take down problem trees that can be replaced
51 Make it financially possible rather than excessively expensive to follow your rules to replace ailing trees. Otherwise we have to wait for impending damage to structures to replace an unsafe tree without paying what is an exorbitant fee for most of us (remember you just incorporated a bunch of 'normal' blue-collar working folk in the new incorporated area).
52 No more ordinances!!!
53 Not sure on the city ordinances. Feels like lots of opposition to additional regs these days, so would have to be carefully crafted to provide what folks can do vs. can't do, in my opinion.
54 Nothing else
55 Only allow trees that won't grow out into the street and look bad and share debree with neighbors
56 Ordinance change should not be more strict
57 Other (please specify)
58 Perhaps lead by example in public areas then encourage private involvement to attain a more complete result... perhaps becoming noted as green and beautiful enclave such as Levenworth is noted as a Bavarian enclave.
59 Police & fire should take priority over spending money on this issue
60 Prevent developers from cutting established trees
61 Protect the mature trees we have in addition to adding new
62 Protecting trees from ?!* construction crews.
63 Protection of view should certainly be considered on private property
64 Provide solid guidelines for developers on what trees or how many to keep. Most new infills and subdivisions simply clear cut!
65 Public instruction on how to care for trees, as well as selecting trees and locations for planting. (Perhaps a partnership with the schools? Or an online class? Perhaps completing the class would allow the person to earn a badge on a social network such as Facebook or Google+.)
66 Purchase and preserve undeveloped land for urban wildlife habitat.
67 Reduce the size of house we allow on a lot
68 Remove $200 fee to be told by a city arborist if a nuisance tree (planted by the homeowner) can be removed
69 Remove Tree ordinance so people will want to plant trees
70 Repeal of the current tree ordinance
71 School curriculum projects to engage family, neighbor, neighborhood, youth and senior engagement
72 See concern in # 9.
73 Soften your strictness overall. It’s ridiculous people have to jump through so many hoops just to make their property safe in terms of tree intrusion and overgrowth. Not everyone has the $ for this, and it invites non-adherence to your city codes.
74 Stay out of private property!
75 Stop allowing wholesale removal of trees in developments
76 Stop wasting tax payer money on printed information material...that's what they made internet and email for.
77 Survey areas and issue action recommendations for WHICH private actions would most benefit the area surveyed
78 The city does not need to focus on private property owners. I think the time and energy needs to be put towards other issues, let’s not create new ones. I feel this would be a waste of tax dollars
79 The City has more pressing issues to spend time and money on. There is no shortage of trees in the PNW. It's insane that the City has spent tax money on this survey; quit fretting about trees and solve real problems.
80 The City needs to acknowledge that large trees near a house, sidewalk or underground utilities are a health and safety issue for homeowners. The City and/or other neighbors should not have the right to tell a property owner what he can or cannot do to keep his property or family safe and healthy.
81 The City should let homeowners decide which trees should be retained/removed/planted on their own.
82 The City should not require saving trees that a private property owner doesn't want. Mostly, people don't want a tree that is too large, they feel is a safety hazard, blocks light into the home, or prevents them from having a yard w/ sunlight. Allow them to take those trees down IF they plant new trees elsewhere on their yard where they will be appreciated.
83 The city should stay out of what people do on private property.
84 The tree cutting companies come around with their full color fliers with pictures of huge trees squashing the house - all photo shopped. The next thing you hear is the sound of buzz saws. They are manipulating people by fear to have their large old trees cut to the ground. The way those companies market their services should be illegal. I have found a few good companies who really care about trees and you can tell that they understand and love the trees.
85 The very few trees that were left by developers were removed by homeowners. Acres on two sides of us have almost no trees now. The man next to us even removed the trees required in the planting strip. When there is only one or two trees in the 7,200square foot lots anyway, it is legal for all the trees to be wiped out in a development. It is happening all around our Bridal Trails neighborhood. This needs to be changed.
86 The word PRIVATE means Private. Too much government, too much control. Let Private homeowners do what they want with the property they purchase.
87 The wrong kind of trees can cause big problems. So education has to have some sort of check on it or people will plant trees that end up costing money to maintain. Such as blocking views when driving, blocking sun in neighbor’s yard etc.
88 Trees on neighbor’s property are danger to ours plus continually dropping limbs, cones and needles on our property
89 Unsure of what else is needed
90 We already are too restrictive in tree ordinances and encouraging private planting may go astray and have a neighbor plant a tree iChat will block public or private views... Which is bad.
91 We already have enough trees
92 We have plenty of trees! The City is OBSESSED!
93 We need to give the authority of decision making for private tree planting into the hands of the property owner. Many people find their yards overgrown after many years and need to have the freedom to landscape/re-landscape to enhance the value and beauty of their property.
94 Who do I find out what the ordinance is?
95 Why should the CITY get involved with PRIVATE tree protection and Planting???

15) What public outreach or communication methods do you prefer to stay informed of urban forestry issues?

65.3% Email or listserv
53.9% City Update newsletter
52.9% City website
22.1% Posters, notices
14.6% Currently Kirkland on TV
14.1% Facebook
10.9% Webinars/online presentations
8.8% Other

Comments:

1 Add to utility bills etc.
2 Articles in local paper or local online blogs
3 Articles in reporter an Kirkland views
4 Booth at Farmer's market, special event at Farmer's market, offering tabling/seminars from outside orgs like Native Plant Society, Audubon, Plant Amnesty
5 Bus posters
6 Community hand on workshops and work parties
7 Deputize the homeless to promote forestry issues instead of their hard times. Costumes would not hurt.
8 Direct mail
9 Email from neighbors
10 Enjoyed the recent PW sustainability workshop on recycling
11 Google+
12 Have City give presentation on urban forestry issues at Finn Hill Neighborhood Alliance member meetings!
13 Having events for public tree planting would increase ownership by the citizens.
14 I am not certain of the best way to reach its citizens other than what i've checked
15 I didn't know I could. I just had my own tree issue - that's how I knew about the urban forest. The city arborist was very helpful to me personally.
16 I read your newsletters but wonder if others do. Email Newsletter might work as one pager? Feeding the info slowly.
17 It's hard to find documents about tree ordinances on city web sites.
18 Kirkland courier
19 Kirkland patch
20 Kirkland patch
21 Kirkland patch
22 Kirkland reporter
23 Kirkland reporter
24 Kirkland reporter
25 Kirkland reporter
26 Kirkland reporter
27 Kirkland reporter
28 Kirkland reporter
29 Kirkland reporter
30 Kirkland reporter
31 Kirkland reporter
32 Kirkland reporter
33 Kirkland reporter
34 Kirkland Reporter/ Kirkland Parks and Rec Guide
35 Kirkland Views is a wonderful resource.
36 Kirkland Views, Kirkland Patch
37 Kirkland Views, the Kirkland Patch
38 Kirkland websites like Kirkland Views or Kirkland Patch, Kirkland Reporter newspaper
39 Local blogs and web sites
40 Mailings specific to issue
41 My neighborhood association listserv (southe rose hill/bridle trails)
42 Neighborhood associations
43 Neighborhood associations
44 Neighborhood e-mail lists
45 Neighborhood meetings
46 Neighborhood presentations of tree importance/value
47 Newspaper
48 Newspapers
49 None of these will reach me. I don't have cable, use Facebook, and get so much junk email it'll get lost.
50 None.
51 Notices, mailed to homes.
52 Online news in Komo and/or Seattle Times
53 Other (please specify)
54 Park tours and lectures about the urban tree and its environs. A festival in the parks celebrating the wonders and beauty of trees.
55 Patch/Kirkland views
56 Plus venues for people to supply input and reactions to policies which directly affect the citizens.
57 School curriculum projects to engage family, neighbor, neighborhood, youth and senior engagement
58 See comments
59 Send me an email

60 Snail mail
61 Stop printing city new letter. News letter are made from paper...once known as trees.
62 Story in Kirkland Review
63 That little newspaper we get... The Kirkland Reporter, and on Kirkland.Patch.Com and (South Rose Hill/Bridal Trails) srhbt.nextdoor.com
64 The City Council needs to intervene and make coherent bylaws regarding tree maintenance and a "good neighbor" policy of sorts.
65 The Kirkland reporter
66 The most cost effective method
67 The Patch and Green Kirkland
68 Tree info page on Kirkland Views.
69 Twitter
70 Twitter
71 Urban forestry sounds like logging - how about another name?
72 Utility bill inserts
73 Via the utility bill
74 We are old school; we read books to educate and inform ourselves.
75 You need to reach out to Condo and housing associations, corporations and individuals, those without computer access.
76 YouTube Currently Kirkland

16) Do you have any additional comments?

1 Removal of diseased trees is not inexpensive. I have to go through head ache of getting a permit.
2 1) Trees are valuable, but they are not more important than people. 2) Private property rights need to be balanced with goals for tree planting. 3) The lake views in parts of Kirkland are more important in keeping property values (and the tax base) high and should be protected as much as trees are. There should be view corridor set asides that are at least as important as tree regulations. 4) The existing tree regulations are overly expensive and burdensome.
3 A lot of the trees, planted by the City, are blocking views. Why did you do that?!
4 A real life story: A young family was building a new single family home in Kirkland and a tree was right in the middle of their home design and building envelope. This family had to spend 30K (Yes $30,000 THOUSAND DOLLARS) for all that it takes to go through the City's tree ordinance requirements and eventually get a NO from the City that they could not take out the tree, resulting in a plan redesign. In total, this is what they got from the City of Kirkland over ONE TREE: 1) They can't build their house the way they wanted. 2) $30,000 of consulting and redesign costs that they can't afford. 3) Huge delays in their project. All for ONE TREE because of the overreaching tree ordinances by activist leaders with no perspective on reality. Please figure it out.
5 After serving on the Planning Commission and living in Kirkland over 30 years, the city arborists and codes are not adequately fair to the public, do not protect our infrastructure and are required in places that are in direct conflict with public utilities. It is time to get it right.
6 algae > trees
7 All these strict tree laws are discouraging builders to develop our area
8 As a volunteer in Kirkland parks, I am impressed with the city support and commitment to its parks. Can serve as a model for other cities.
9 As Kirkland becomes ever more densely populated, it is increasingly important to maintain and expand the greenery throughout our community if it is not to become an urban grey-scape.
10 As you can tell from my other comment, I am aghast at the amount of trees being cut down for no good reason. Friday the people next to us cut a huge Douglas down so they could make their deck bigger. Across the street three new homes are going in and we were told all the trees were going down. Really Kirkland? You have to do better than that. The 32 pages of tree ordinance are not doing any good as far as our street is concerned.
11 By forcing density (too many houses on too small lots), we are also pushing the trees out. No one wants a tree towering over a structure as it is asking for trouble (everything from falling branches, masses of leaves clogging gutters, to severe structural failures). We have a massive oak tree that was planted in 1964, too close to our house, and it will unfortunately have to go later this year. It is a majestic tree, an asset for the city, but in being too close to the house, the risk in retaining it is just too great. If it was 10 feet further away, I'd keep it - but it would then just be a problem for our neighbor to the East.
12 City employees enforcing tree planting are not knowledgeable about tree choices and are creating landscape nightmares. Residents in my neighborhood are rightfully proud of our beautiful gardens and would be better off managing our own trees!
13 City needs to do a better job on pruning overgrown bushes along sidewalk. Most homes don't know it is their responsibility.
14 City rule/regs on trees especially needs to be conveyed to the recently annexed areas of Kirkland.
15 Come and see the oldest and most beautiful trees in Kirkland on my property. MD
16 Diversity of trees is as important as the acceptance of the diversity of people.
17 Don't overplant. The Heritage Park walkway no longer has views of the lake. A shame.
18 Don't suggest increased funding in some areas and then leave direct mail off the list of options for public outreach.
19 Encourage accessibility and use of the current parks, such as Bridle Trail and watershed.
20 English holly should be declared noxious weed and not protected. It is not native and invasive. Mangled street trees should be allowed to be removed. Dying and old street trees that are no longer pretty should be allowed to be removed without a fight.
21 Falling trees do cause power outages and PSE should be more proactive in taking problem trees down before the wind does!
22 Finn Hill residents are more knowledgeable about trees than the average urban Kirkland resident. I know from talking to arborists (we deal with at least 6) that Deb is stretched thin with the annexation. I personally think she should concentrate on conflicts between neighbors, and not worry about intervening to enforce the code where the neighbors agree on the proper tree management. For example, we should be able to quickly deal with dangerous trees (we have had quite a few) without going through red tape.
23 For control of environmental quality we should stop additional development rather than planting more trees which block views.
24 For Q4, I know most trees and I know the native ones. I don't know some of the cultivars. For Q8, my understanding is that the homeowner does routine care and the City provides resources for extensive care like disease control, limbing, planting and removal, though the homeowner can plant too
25 Glad you are thinking about this!
26 Go green!
27 Homeowners should be allowed to cut as many trees on their property as they please. (Without paying the city for a permit) You get enough of our money.
28 How about an enormous Swiss-Family Robinson tree house to house city hall? :)

29	I also value open space.
30	I am a former downtown resident and developer. Trees were getting too tall and blocking view of lake.
31	I am amazed and dismayed that people don't have the right to do what they want with trees on their own property here. We lived in unincorporated King County for 25 years and cut as few or as many trees down as we felt were necessary. However, I understand that some people would cut them all down, which is not acceptable. Therefore, there needs to be SOME regulations!
32	I am generally satisfied with trees / urban forest area in Kirkland. What I am not satisfied is with city of Kirkland's ability to maintain greenery along city sidewalks and along the roads. They are generally overgrown with weeds at least in my neighborhood. No maintenance is provided by the city. The city needs to figure out on how to maintain these public green areas as it gives a very bad outlook on the neighborhood and ability of city to provide livable neighborhood. Rather than spending time and money on trees I think the city should consider maintaining of existing green belts.
33	I am glad this issue is on the radar!
34	I am glad you are doing this survey. We need to keep our trees and keep them in good condition. I am very interested in helping with this effort.
35	I appreciate what the City has done to protect its trees and to accomplish the goal of increasing its total area of tree canopy. But, beautiful heritage trees are still being lost!
36	I appreciate your concerns and this survey
37	I attended the free class the city did on water gardens. It was very well attended. A similar class relating to urban tree selection and care would be great!
38	I believe that, given the opportunity, people will plant and maintain trees in their yard. Currently City ordinances force residents to keep trees that they don't want to keep.
39	I believe the City of Kirkland needs to drive through the neighborhoods to take a look at the state of the sidewalks, how trees are or aren't being maintained by some, mediate view issues, and make sure traffic signs are always visible or fine warn and/or start fining folks who don't comply.
40	I can't look in any direction without seeing at least 50 trees for every person in Kirkland. Enough already!
41	I chose where I live because of the number of trees. I don't know the ordinances but I do know that education is best with some laws of protection. I don't want too many laws as they get in the way of common sense at times and they are too rigid. I already find the Kirkland police to be that way.
42	I feel strongly that trees aren't just a matter of aesthetics. They are an important part of the survival of the planet and the web of life.
43	I have lived here 20 years and I have no knowledge of what the city regulations are. Where was I expected to pick that up?
44	I have lived in Kirkland for 15 years and have witnessed a dramatic increase in traffic congestion. There has been a noticeable decline in the quality of life in my neighborhood and this has little to do with trees and everything to do with unlimited building projects. More buildings mean more people and more people mean more cars and more cars mean more traffic and more traffic means more pollution. And you can't expect trees to solve these man made problems!
45	I know there are many who want THEIR view protected and see tree removal as the way to do so. However, what they rarely acknowledge is that the "view" they want protected includes all the trees that are not specifically blocking THEIR view. The trees ARE our view! In addition to all else they do. I would say that anyone who prefers a treeless view needs to move to Arizona.
46	I like to understand my right when my neighbor's trees overgrown and dropping leaves on my property. Also pruning requirements to maintain view & vista.
47	I live on the edge of Juanita Bay park and feel very fortunate to live in a vibrant urban forest. Kirkland did a great service in acquiring so much of Forbes Creek valley to preserve as forest land. I think it would be a great benefit to the community and do much to promote awareness of the importance of urban forests by developing a simple trail the length of the park up the valley. Getting people up into this diverse area would teach also about the dangers of invasive and noxious weeds that are becoming established in this and other urban forests.
48	I love trees, but as a condo owner with a view, I know that in 4-5 years, evergreens on my neighbors' property will block my view. I'd like to know if there are any ordinances in place to keep neighbors' trees from blocking views.
49	I myself love trees but when i plant a tree on my land I should have the right to cut it down if needed.
50	I need a better understanding of if and when the city is going to prune the trees on and adjacent to my property that are growing into utility lines. Over 30+ years, this has always been a mystery to us.
51	I object strongly to the use of Roundup/pesticides at our parks. It is known information (and very available) that this causes birth defects and various health side effects. With educating people will understand we are in this together and need to help with weeding. Promoting to schools to get kids out there to help! With stewardships we could solve this! Earthcorp and Green Kirkland are awesome. To inform folks with the info would be great. Thank you for all you do already, realizing $ and paid folks can't do it all.
52	I realize that not everyone uses the internet, but please don't spend money and paper advertising the incentives of saving trees. It's counter-productive. Still with electronic notification methods and maybe informational meetings at libraries in the area.
53	I see new developments where large trees are fenced and protected during the building process. But in the long run, many of these trees are/will be too large. Instead of insisting on keeping existing trees, I believe developers should be required to replace existing trees with new trees that are more appropriate to the location. Plant more mature trees that have been chosen for their appropriate size in the development.
54	I see this as a biased survey. I don't think the city government should be spending my tax money to promote the planting of trees. I like trees and I've planted them in my own yard; I don't need the city now telling me how or if I decide to take one out. I also see it as a false premise that trees increase a house value. In fact, overgrown or fully mature trees are as likely to lower property values if they drop debris on the house or block a view. This survey didn't seem to survey my feelings about a tree policy in Kirkland; it seems to be a survey to see how willing I am to spend more of my city taxes on public policy to increase tree coverage. This would have been more useful to give a paragraph of education first. Kirkland spends $xx / year on tree policy and forest support. This is Y% of the total budget. Some like to live in a mature forest. Some like to have a view. I can't imagine everyone has a common view of tree policy.
55	I think an urban canopy greater than 60% is an achievable goal. It would be wise to assess the canopy in neighborhoods, rather than average the whole city.
56	I think Kirkland should continue to strive for its original goal of 40% coverage (in the original city limits). There are no more trees in the area as a result of annexation. This is a rather capricious reason for declaring victory on this issue, don't you think?
57	I think the city of Kirkland does a wonderful job with its landscape and hope that the attention to detail I see eventually propagates to Finn Hill. Thanks!
58	I think the city policy on restricting tree removal or requiring tree replacement on a private homeowner site is overboard. I know trees have benefits, but we've gone too far in Kirkland with in tree requirements on private property.

59	I think the council has given the city too much say into tree's and whether people can keep or cut trees. Our neighbor has a big Cotton wood and the roots are raising havoc with our patio, our yard. The tree is approx. 30 feet away from our house and the roots are surpassing our home looking for water. I have small cotton woods growing in my yard, roots 3 to 4 inch in diameter growing near our foundation all from our neighbors' trees.
60	I think the removal of cottonwoods on private property should be allowed at any time. Their removal should be encouraged on public property that are not wetlands/forests (street & formal parks)
61	I think trees are an important part of the city's landscape and character.
62	I think we have too many trees in some areas and don't need people to plant more in these areas. I don't think citizens should be encouraged to plant more trees. It could be that their property already has enough trees and adding trees would be unhealthy for the existing trees, etc. Expert assessments should be made as to where trees would benefit thinning and where more trees should be planted, not just planting whatever, wherever by default. Property owners should perhaps get a subsidy from the city for a periodic tree expert assessment. Our neighbors have several huge trees that appear to be unhealthy with large dead branches hanging near the edge of our property. They could use an expert opinion about what to do about it. They certainly don't need to plant more trees.
63	I understand that the city likes lots of trees and vegetation and so do I but the policies are totally out of balance. The homeowner's hands are tied when needing to take down a tree even when it's obvious the tree is either dead or a hazard to the property. Many areas have been designated wetlands/green spaces then just left to grow wild where rogue trees and vegetation is out of control. When we call the city about taking care of their areas I frequently hear that they can't do that anymore because they don't have the money. That's a problem for me because they shouldn't have been designated in the first place. It's kind of like a builder going out to build a house are not setting aside enough resources to finish the project.
64	I want my view back ... Willing to donate if trees are topped or pay for it.
65	I was able to get the City of Santa Monica, CA, my home town, to enact new tree land marking legislation that made it legal to landmark trees on private property. They had lost about 75% of their tree cover in 40 years due to new construction of whole-lot condo complexes. Without strict laws, trees inevitably fall victim to the whims of owners and construction speculators. I'd like to see property tax credits granted based on the number and size of trees maintained! Stronger anti-cutting penalties, more rigorous tree protection enforcement, and some new planting incentives would set the tone while building new community awareness of the importance the City of Kirkland places on its urban forest.
66	I will spend over $2000 just for permits and professional care of trees required by the Kirkland Tree Ordinance. I will never plant another tree in Kirkland as long as there is a Tree Ordinance that prevents me from taking care of my trees myself as long as I am able. The cost and inconvenience is just too much, and it is totally unnecessary. The annexation area had higher percentage of canopy than Kirkland, without such an ordinance. Urban density is a bigger factor. The city needs to have more open spaces where trees can grow without being a hazard to structures.
67	I wish it was easier to report sign blockage due to overgrown trees and vegetation.
68	I would like the city to think in terms of forest and habitat, instead of "just trees." Diverse, intact properties such as Woodlands Park are more important than planting strip trees. The city should purchase and maintain existing wooded properties. These are far more important to wildlife and water quality.
69	I would like to see an increased and continued focus on maintaining the mature tree cover in the city of Kirkland.
70	I would like to see consistency in pruning of trees at the power/phone lines. Or, not allow planting under power/phone lines. Some of the pruned trees are now misshapen and not as attractive.
71	I would like to see the Finn Hill green belts developed into a trail system.
72	I'd like to see more attention paid to using fruit trees as landscaping. We do this in our yard and it's great to have trees that also provide food. With the help of City Fruit, there should be volunteers to pick the fruit as well.
73	I'd like to see more fruit or nut trees
74	If a developer has to retain certain trees on a property, be sure that the subsequent owner retains them as well, or eliminate the requirement for all. Trees seem to disappear as soon as a redeveloped property is sold. Consider a stormwater credit on the utility bill for properties with exceptional canopy coverage.
75	If the city requires trees be planted they must have a program to clean up after the trees and maintain the trees of our city. Bottom line this is a city not a forest. Streets signs and street lights should not be blocked by over grown trees.
76	If the City wants more trees, do it on public property owner and quit regulating private trees
77	If there was a way to provide an incentive for property owners to maintain conifers properly to avoid future property damage that would go a long way toward encouraging residents to care for trees instead of cutting them down.
78	If we organize could have a balance for most cherished lake views and nice trees to complement our environment. Right now too messy, lower branches of pin oaks everywhere. Not pretty at all.
79	I'm a big fan of trees in Kirkland. They add a lot of character. I am NOT a fan of taxes. We pay too much already. If we need more money to help with tree maintenance or education cut something else.
80	I'm glad the city cares about trees. It's a wonderful "cause"!
81	I'm glad you are doing this!
82	In addition to tree, I'd like to see city take some action on discouraging the usage of weed killer and pesticides. Those post a big impact on our environment for our future generations too and they are hidden dangers!
83	In my opinion, I feel the survey is slanted for further protecting or enhancing tree development. Trees grow like weeds. Trees along public streets are hazardous; they can fall on cars passing by and on power lines causing extreme power outages that can last for days sometimes a week or more in addition to the cost of labor to restore the lines - these costs are then passed on to the consumer. Trees disrupt views - the magnificent vistas in the Pacific NW are reasons why people populate to the region. Yes, trees provide many health and aesthetic qualities, but a balance needs to be implemented. The mountain and lake views are substantially diminished with so many trees; we've gone crazy in my opinion. The management plan needs to be seriously reviewed to enhance our vistas while helping to preserve our habitat and erosion issues. Restricting dirt bikes and motor scooters from protected areas needs to be reviewed; it would eliminate the need of planting more trees if the natural habitat were not damaged by such activities. More dog parks for dog owners to avoid the trampling of our forestry areas; enforce the leash law restricting dogs from having a free run through our forests and damaging the wildlife. Not an easy task but one that needs serious revamping.
84	Individual property owners should not have the city dictate what they can and cannot do with trees on privately owned property. Too much legislation already.
85	Instead of encouraging the public to plant inappropriate trees in all the wrong places, why don't you encourage the proper planting and maintenance of the trees that already exist? There should be restrictions on tree height/width in certain locations in residential neighborhoods. The public needs to be educated about the growth habits and eventual size of the trees they are planting! I love trees, but spend too much time and money dealing with the damage caused by misplanted and unmaintained trees in my

	neighborhood!
86	I really do think there are too many trees which obstruct excellent views such as the water and mountains which are truly wonderful. I come from a country (England) which has an excellent balance of trees in the countryside so that views are not obscured. Frankly, I think there are far too many trees. I would almost say that some people are obsessed with trees. They cause many power outages; in many first world countries, trees are not allowed within falling distance of a power line. In fact this survey is slanted towards the view that more trees are better, when perhaps the opposite may be true.
87	It is currently too easy and too cheap for residents to cut down trees without consequences.
88	It seems like recently most building sites in Kirkland are going in and taking every bit of vegetation out, thus removing old, but healthy growth trees
89	I've been worried to see the tree clearing along 405 S near NE 70th and 520. I see the old growth trees in Kirkland as a huge benefit to our region. They help define the character of our corner of the Pacific Northwest. I wish the city could do more to prevent residents from clearing large healthy old growth trees from their properties. Tree removal on private properties affects not just the home owner, but also the neighbors and the whole neighborhood. If everyone removes just one large tree each year, as time goes by we'll lose a big piece of what makes our city special and desirable.
90	I've lived in Holmes Point for 25 years, and I would like to see the SDO for tree retention maintained and enforced.
91	Keep Kirkland green and beautiful. And we also need more off-leash dog parks. Thank you.
92	Keep the Finn Hill forests forested! It's not just a place for humans.
93	Keep trying to educate the public about trees. We really do not own any of them...really!
94	Kirkland generally has ample flora, and has been easy to work with in the "old" city.
95	Kirkland has a great park system and tree maintenance program. We need to increase the enforcement of existing tree related ordinances.
96	Kirkland is a city of views. Let property owners trim trees for views. Last i heard the city and 1-1/2 arborists on staff. Question if we really need this
97	Kirkland is being taken over by trees. They are nice when they are small but they all grow up onto 50 foot monsters. Kirkland is an urban view community. There is a point when there are too many trees. We are there.
98	Kirkland is wonderful due to its public parks. Thanks for maintaining for all Eastsiders to enjoy.
99	Kirkland made it a nightmare for my wife and I to build a single family home on Rose Hill because of the trees. The threw every piece of red tape at us and finally after 4 arborist visits, 2 redesigns of our house, and $10,000, the city employee admitted to misunderstanding the regulations and gave us the green light. This was all while keeping almost 3 times the required number of tree credits for our lot. It's not even like we wanted to scrape the lot bare... we literally had to spend 8 months and $10,000 just to get them to approve the tree removal when we were keeping 3 times the required number of trees.
100	Kirkland needs to educate people not only about trees but about Kirkland's policy and laws concerning trees.
101	Kirkland's character in part stems from its parks and trees, so appreciate the efforts expended by city crews to make it happen and looking good. Thanks.
102	Let people pay for and trim city trees hiring a professional with your written permission/ special form.
103	Lots of the publicly planted trees in NRH end up dying due to lack of watering. Would prefer to see money going to care for what we have and making sure that trees are pruned to allow us to view oncoming traffic especially along the 124th corridor where smaller trees are blocking our ability to safely pull onto 124th from side streets. Ne 95th and 124th is a particular problem.
104	Love treee! Only major concerns are falling limbs/trees and obstruction of vision to see traffic especially on side streets.
105	Love trees but the City of Kirkland has gone too far in forcing the citizens to plant and protect trees that aren't even owned by the homeowner. They need to find a middle ground and solution to the trees in planter strips that are owned by the City not the homeowner.
106	More trees, better frequent public transportation, less malls and parking lots
107	My neighborhood and property have many tall older evergreens. As the trees are aging, my neighbors are cutting theirs down, which makes me feel guilty about doing so. However, as I get older, I struggle to maintain my roof and yard due to the continuous tree droppings and moss. I don't know what the solution is but I imagine many homeowners have the same dilemma. Perhaps there is a way for homeowners who cut their trees to sponsor new trees in other locations, similar to new development mitigation.
108	Need to know what to do with extra fruit. Love to donate but I can't pick it myself.
109	Never enough trees!!
110	New construction/development get away with so much with loopholes in the plan (buy replacement trees but let them die/don't plant. More inspection!
111	No
112	No
113	No
114	No
115	No offense, but employing a full time urban forester is a waste of money. You are a very nice person, but your position is non-essential.
116	Not a very good survey, I'm sorry to say. Mike Pritchard, mikep@5circles.com
117	Offer incentive to property owners who keep stands of old-growth trees together for wildlife habitat even though their views are blocked!
118	Once again, please landscape and plant trees in Kingsgate along 124th Ave from 132nd St.
119	Open-Ended Response
120	Ordinances are strict enough to discourage proper and beneficial maintenance. Expanding this is counterproductive. Use the money on basic services: police, fire protection, etc.
121	Our neighbor took down two perfectly good 100 year old fir trees this summer. Either the regulations are too lax to allow this, or they are not being enforced. Either way it is tragic.
122	Our neighborhood and the one next to us routinely cut down tall Douglas firs, partly because there has been no visible effort to share reasons not to.
123	Plant something other than Oak or trees that block the views and plug the drains. Most people don't have views and deserve to see the lake without obstruction.
124	Planting on the parking strips simply encourages dog owners to leave dog wastes on the strips. We have an issue in Kirkland/South Juanita with dog owners not picking up after their dogs; this is disgusting and not encouraging to plant trees or have greenery anywhere. The city should be more forceful on maintaining cleanliness on the street before planting trees.
125	Please do your best to conserve the forests in our area!
126	Please don't create more rules that homeowners need to follow. Let us do what we want with trees on our property. however, feel free to educate us

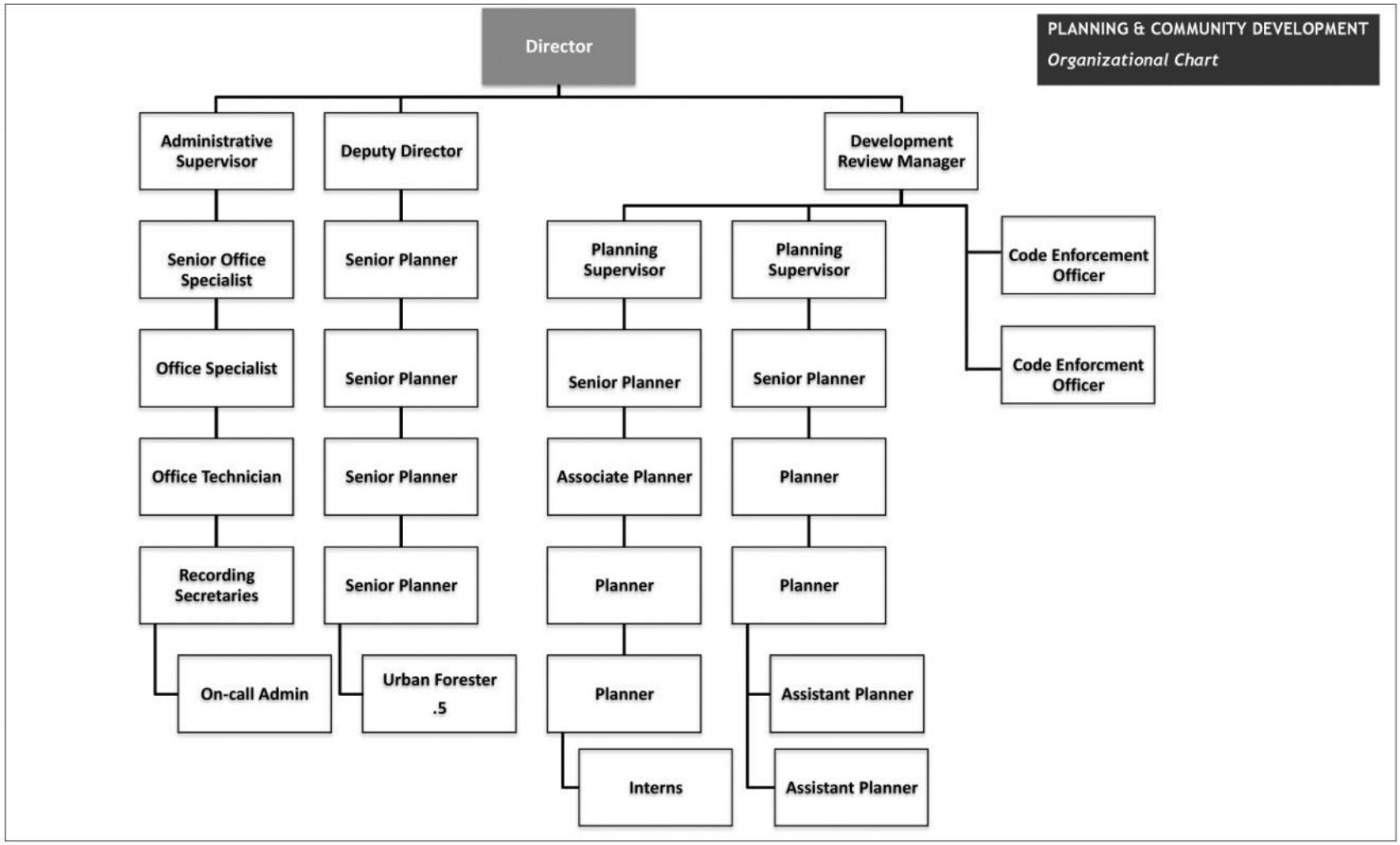
	Please don't over-react about wanting to promote a healthy tree canopy so it is so difficult and expensive to replace an ailing tree.
127	To those doing everything they can to save every tree ... I LOVE trees and am the biggest promoter of wildlife habitat around ... but the quicker I can afford to change out an unsafe tree and get a better tree in the ground the more robust the future of the tree canopy. It is so ridiculously expensive for the average person to get through your permit costs and the necessary documentation that we can't afford to then pay to have someone safely take out a tree so we can replace it for a more robust tree canopy. Make it reasonable.
128	Please help to keep more trees in Kirkland! Start a Heritage Tree program like Seattle has to celebrate and educate. Education will only help a small fraction; enforcement is the only way to protect our trees.
129	Please protect the urban forests on private and public lands with additional funding from surface water fees and other grant resources and property tax collections
130	Please stop condensed building. Please limit building height. People should see trees, not high-rises. Don't turn Kirkland into Bellevue. Hire real city planners rather than private interest puppets.
131	Private property owners should not be restricted to cut down trees that belong in a forest. I have had seeming healthy trees fall in the wind. Thankfully, no one was hurt. The city should allow larger fir, cedar, and maples to be removed without restriction. The city should encourage the planting of safer trees. Save the big trees for the actual forest.
132	Property values in Kirkland are based on views! So, tree planning, mgmt. must take that into consideration
133	Protecting views is important for many of us and I am unaware of any city efforts to help on this issue. Protective covenants are not sufficient.
134	Repairing the sidewalks along Central should be done WITHOUT the removal of all those old, beautiful trees....please.
135	Ridiculous survey. What about obvious questions like: Over the previous 10 years of increased forest canopy coverage, my view has been improved or been diminished? Over the previous 10 years of increasing forest canopy, I feel that my house value has been positively enhanced or not. This seems like a survey to get me to support more trees in Kirkland. This isn't southern California where we have a sun problem and need to shade our houses to keep them cool. Get a clue. We have moss problems on our roofs because our houses have too much shade! Our lawns and gardens can't grow because our season is too short. I like trees where it the property owner wants but I don't want the city to tell me how to plant my yard or what to keep or not. Personally, given our views of the lake, I'd rather have a view than tall trees. If we are looking to put in city advice, I'd rather have the city coach people that semi dwarf trees make great sense for (sub) urban living and they rarely exceed the house height. This provides privacy and fruit if you choose. Be considerate; don't block the view of the lake for your neighbors.
136	Save the trees on Kirkland Avenue. Don't wait until you look back with regret!
137	School curriculum environmental service projects that---oh-by-the-way---engage family, neighbor, neighborhood, youth and seniors, to----oh-by-the-way---enhance resourcefulness and care of both natural and social environments. Engages, matures adolescent energy, and melds it with---oh-by-the-way---revitalized, lonely marginalized senior intelligences.
138	See #9. There needs to be recognition that people living in heavily treed areas face some different issues than those who simply have trees along their street or one in their yard. This particularly relates to the need for trimming to maintain views or /and sunlight, and potential hazards.
139	short plot permits eliminate trees contractors remove too many in the guise of their projects. need to protect the tall pollution controlling trees that are removed all along freeways and etc. and with new bldgs and construction
140	Should be ok to trim for view and should be regulation on types of trees that can be planted in view neighborhoods.
141	Single Family property owners should be allowed to trim, cut down, and generally maintain the trees and any other landscaping on their property without having to pay a fee and submit forms to the city with what they plan on doing as long as it conforms to the neighborhood bylaws (if any).
142	So many trees, not enough city crews to take care of them. Too many removals when there are others construction alternatives available. Removal should be the last choice!
143	Stop planting trees and shrubs at crosswalks and intersections before someone gets killed all for the precious tree. There needs to be laws and inspections for this.
144	Thank you for caring about the trees that make Kirkland more attractive, calming, and healthy.
145	Thank you
146	Thank you
147	Thank you for asking for citizen input.
148	Thank you for caring enough to do this survey. Since I have moved here in the mid 1980's, the area east of Lk WA has lost many of its native trees to development. Just looking at the satellite maps during the TV weather news reveals how much less green the whole eastside of Puget Sound now is. This area would normally be heavily forested with Douglass fir, alders, etc. keeping it cool, shady and moist. Now it is up to local people to try to maintain a tree balance but I don't think that many understand this. Besides trees have unique beauty. So thanks for addressing this issue.
149	Thank you for caring. I really feel that we need to protect our trees. Perhaps the tree cutting companies are the tree's biggest enemies. They market using a lot of fear tactics.
150	Thank you for conducting this survey. As you have seen, I feel strongly that private citizens should have the right to make landscaping decisions regarding their own property without interference from government unless public safety can be proven.
151	Thank you for creating this survey, I think this is a very important topic.
152	Thank you for seeking public comment!
153	Thanks for asking
154	Thanks for asking for opinions.
155	THANKS for doing this important work!!
156	Thanks for putting this survey together!
157	The answers you are looking for are well known by those of us who follow this issue. The way that most of this is worded is obviously just ripe for the city to pull out "survey results" that support what you already intend to do.
158	The biggest problem is fear of what government will do later. If I plant a tree today, on my property, do I need a permit to remove it? We have a green common area that we (as a group) bark (mulch) and such; are we allowed to plant trees in it? Discouraged from it? There's just no clarity as to what the rules are and what will bite us later.
159	The City has planted trees in the median of 124th St, west of 100th Ave., several times, and then neglected to water those young trees. What a waste of time & $$$.
160	The city is doing a great job supporting park recovery projects
161	The City should allow citizens to make management decisions regarding the planting, maintenance, and removal of trees on their property by relaxing current tree ordinances. Providing education and arborist consultation is more effective when requested by the property owner.
162	The city should consider all uses of an area and how trees can enhance or hinder the various activities that people engage in. It's

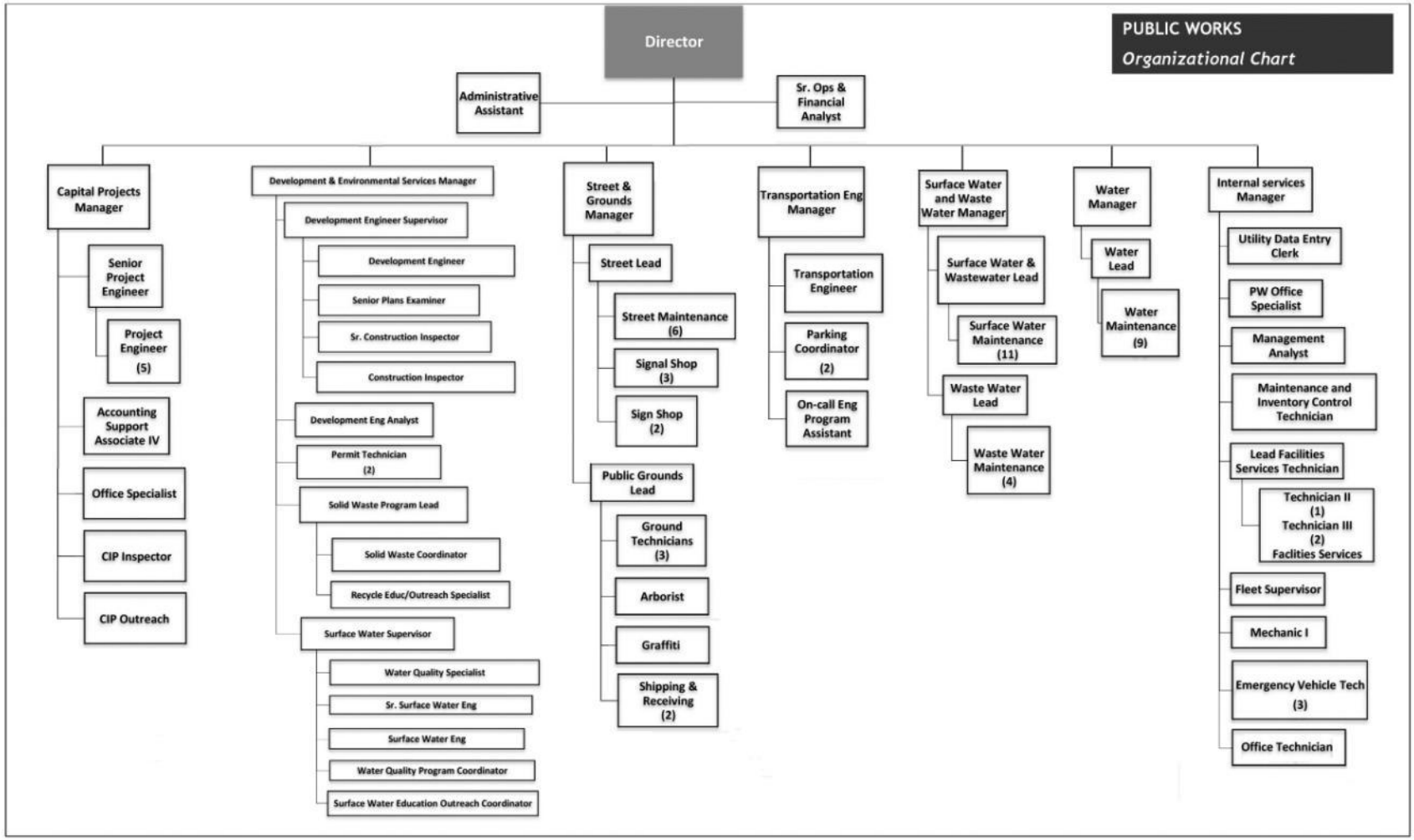
	shouldn't be a one size fits all plan.
163	The City Tree Ordinance should be changed to give back to the property owner the right to remove trees they do not want. I'm okay w/ the City requiring supplemental planting if existing trees are removed. Trees are NOT more important than people or property owner rights.
164	The contract with PSE to maintain trees that are on private property that fall within the "maintenance zone" needs to be readdressed after recently having two trees on our property butchered by an "arborist" hired by Asplundh to remove branches and limbs that may potentially cause damage to the power grid. Also, on heavily wooded road, Juanita Drive, why doesn't the city look into burying the power lines to prevent outages vs. hacking the crap out of trees, further damaging and potentially leading to disease.
165	The current ordinance is an extreme overreach on a non-problem. This is the Pacific Northwest and vegetation grows very fast. Rather than driving up housing costs with unnecessary regulations, developers and owners should be incentivized to plant trees rather than penalized by requiring permits, inventories, and building adjustments and relocations. In our case we have planted numerous trees on our lot (many now over fifty feet tall) over our 38 years in Kirkland and are now being penalized by the current ordinance for our efforts. We should be able to manage our own forest as we see fit.
166	The cutting down of healthy trees on private property needs to be restricted. We had a beautiful old mature evergreen tree that was the on the property behind us facing the lake, Yes it blocked part of our view but it was beautiful! The owner is starting to cut his trees down to make way for a big BOX home that will be so ugly. I would much rather have a tree blocking my view than the back of a home.
167	The Kirkland City Council has overstepped its authority in annexing Finn Hill, Kingsgate, and Totem Lake. The City of Kirkland did not get the expected payoff from the State nor King County when the "Council members" voted to annex. The citizens of Kirkland did not even get a vote on this issue. Why? The Kirkland City Council methods to win approval for incorporation were (illegal but not prosecuted due to the State & County wanting this process to continue) it's all underhanded. Your open houses at Finn Hill JH and Juanita HS where one-sided diatribes which illegally promoted incorporation and did not allow the public to present their pros and cons to incorporation nor the process used. Where was the debate process? The fact that city staff mismanaged the payoff process and (documents for reimbursement) costing the city millions in unshared expenses means some people should be fired immediately! The size of the Kirkland bureaucracy has outstripped its usefulness. Solution: Freeze retirement plans, eliminate office staff or give an across-the-board 15% pay reduction, fire the dog catcher at Denny Park, consolidate Department heads, eliminate fee's for green energy (solar install permits $750.00! or more), Stay out of peoples yards unless invited. Next time paint Kirkland Police cars blue again. This Darth Vader mode has gone far enough. Gradually expand public access to Lake Washington with new boat launches on road ends. Areas that were formally unincorporated King County should be treated differently when it comes to Kirkland City code. Take half the revenue from the card rooms and set aside money for low income and senior home owners forced to complete sewage hookups that are mandatory? Without public pressure saying STOP, at a time when all financial indicators say save money you looked to tear down several popular fire stations. We are also watching the efforts made behind the scenes to eliminate the Houghton Community Council.
168	The new RR corridor is a great opportunity to plant new trees!
169	The process just to make our own neighborhoods and private properties safe from overgrown and poorly planned trees is silly. City council needs to re-address the codes and encourage planning and building practices to adhere to more strict guidelines so homeowners don't have issues of safety down the line.
170	The required question on trees between my street and sidewalk should have another option if it's going to be required. I don't have a sidewalk and don't have trees on the city right-of-way. I am glad Kirkland continues to pay attention to trees. The annexation didn't add any net trees to the world, so please keep trying to increase the general tree cover.
171	The tree ordinance is a good start but it is not stringent enough to protect our trees.
172	The tree regulations in Kirkland are far too extreme. It is ridiculous to prevent property owners from removing more than 2 trees per year on their property. Having tall trees so close to our homes in a stormy climate is a life threatening safety issue. Furthermore, when these trees become a danger it can be over $2,000 per tree to remove them since they are so close to homes. I believe the City needs to allow more trees to be removed, particularly during redevelopment projects, and allow new trees to be planted on these properties at safe distances from the homes.
173	The trees along the downtown streets and Market Street (in the median) look awful and need to be pruned and maintained. It's ironic the City has strict rules on residents and doesn't appear to take care of their own trees.
174	The trees planted in and near city rights of way cause too many problems with downed electric wires, buckling sidewalks, view blockage of traffic line of sight and deaths where cars hit the trees, whereas if the trees were not so close to the street. In most cases the car would jump the curb, in this unfortunate occurrence, and then get right back on the street with only the need for an alignment, not a car crash. The city engineering standards should not conflict with the condition of the power lines above and future sidewalk damage caused by the tree roots. The trees in the right of way cause great maintenance for leaf clean up. Government should not have control over property rights with trees on private property.
175	There are some street corners west of Market that you can't see cars coming because hedges block the view.
176	There are times when I think there is too much emphasis on saving every tree to the detriment of the community growth and changes. Trees can be replaced and not all need to be saved and protected forever. My sense is that the residential areas of Kirkland have good tree cover, whereas Totem Lake and other nearby commercial areas could use more trees.
177	There are too many too large trees adjacent to my property, they have grown so tall we get no sunlight on half of my yard in summer and none at all in winter, they reduce the value of my property, increase heating cost, continually drop needles and other dendritis, pose a hazard of falling branches when it is windy; the trees are packed too close together and are generally ugly and a constant nuisance.
178	There needs to be a balance in the tree policy. The City seems to be very strict about telling homeowners to plant more trees and restricting them from removing trees. However, the City was more than happy to remove the trees necessary to build the Transit Center. And now the City has removed 7 trees along Kirkland Avenue. The rules should be consistent for the City and for the landowner.
179	There should be serious fines for people who don't properly maintain their trees and for those trees that block right of way views (e.g. impact traffic because you can't see around the bushes/trees). With the annexation, a lot of us don't know the Kirkland ordinances for trees and whether there are any grandfather clauses from when we were county. Sending out information pamphlets (especially before winter!) would be greatly appreciated.
180	There's a lot of sidewalks in Houghton area that have low branches over the sidewalk, or the sidewalk is obscured by adjacent shrubs - It would be nice to have you (City of K) enforce (i.e. drop off a reminder notice on the land owners door) to trim bushes, etc. and keep the sidewalks clear. In so many areas I have to walk in the road, especially on rainy days when the branches drop lower.
181	There's a need for trees, but it should come with balance. Smaller, less invasive trees are easily managed, cost less to maintain,

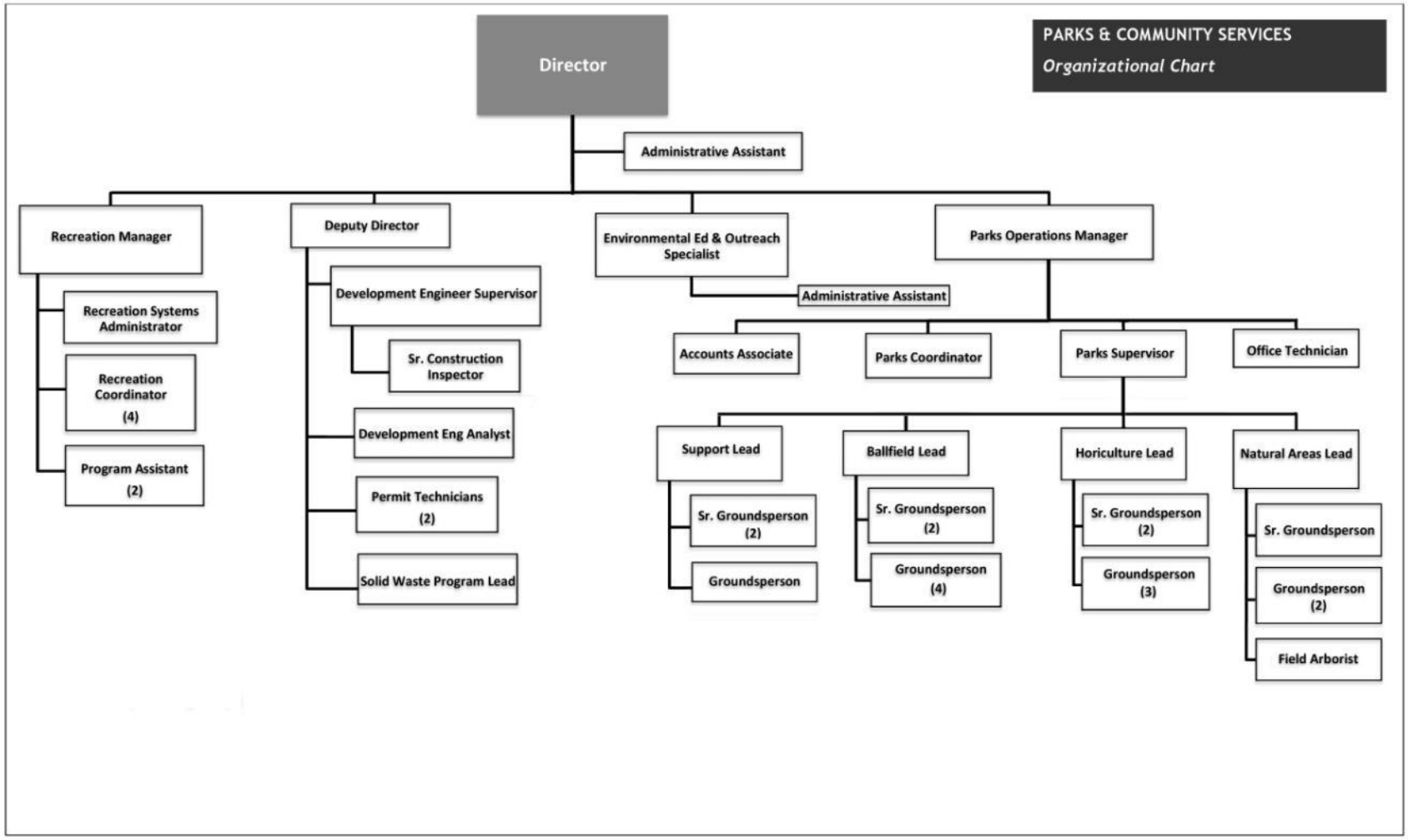
	and look fine. Market street is prime example of how giant trees just get out of hand.
182	There's too much heavy handedness from the City when a homeowner wants to make a rational and ecologically sound decision on managing private trees. There should be oversight, but it should be HELPFUL, not punitive.
183	This area has enough trees, and we don't need more. They cost a fortune to remove when they die.
184	This cannot be one size fits all. View properties need some form of protection like a height restriction from neighbors that grow trees into their views significantly. Trees are renewable resources and can be replanted. Many street trees when they get too old, break up the sidewalks making them unsafe for many to navigate.
185	This has been an issue of mine for many years. NE 132nd St. is an example, as well as Juanita-Woodinville Rd., where the planting strips w/ trees and grasses, sometimes 3 fty high, look terrible much of the time. They probably aren't the kind that would look good anyway, and look worse when not cared for. Neighbors habitually chose not to care for the grounds near the streets. Let someone else do it, they seem to be saying.132 costs a fortune for bi-yearly pruning.
186	This is not a very well-written survey... The questions are leading and confusing.
187	This is one of the worst cities I've lived in regarding tree ordinances. You can't even prune a tree, let alone cut one down, if you dare suggest it's to help improve your view. Even if the city planted the wrong tree in the first place, they will not allow you to remove and replace it with an appropriate one. It's decreasing property values and resulting in people moving to Bellevue and other areas that are more flexible. It's time to be more flexible and responsive to your constituents instead of being "tree nazis"
188	Too many trees in downtown block storefronts and signage. Along Juanita Dr trees will block beautiful views of the lake.
189	Tree laws regarding removal on private property are too confusing. We had an evergreen tree pop up that no one planted directly over where our utility and water lines run down to the street. This will eventually cause major issues to our pipes, but even though we did not plant the tree we are getting hassles (not to mention major costs) to try to remove it. Seems like an important part of encouraging trees should be encouraging maintenance, safety, and ALSO removal of trees that will likely cause damage to things like sidewalks, pipes, and others property (all 3 of which will be affected by this tree). This should not cost the citizens exorbitant amounts. Also if our neighbors are not safely maintaining their trees it affects our safety and property. This is a frequent worry in our neighborhood.
190	Tree removal rules and regulations are unclear to me, as a new city member on Finn Hill. I'd like dangerous trees in neighborhoods taken out before they cause property damage.
191	Trees add an immense amt. of quality to our surroundings and keep our community in touch with the benefits of nature. There's enough concrete. In this stress-filled world, people need to live in surroundings that feed & nurture their spirits and give to the quality of life for us all.
192	Trees and plants that are newly planted at schools should NOT be allowed, unless the LWSD will continue to maintain water and care for. They typically plant, water for a short time...turn off irrigation systems to save money and the trees and plants die or look horrible
193	Trees are disappearing too fast in Kirkland
194	Trees are so important and with the increased density we are looking for in the city, it is important that we keep and improve our tree canopy
195	Trees are so important!
196	Trees are something we all need to appreciate and you have mentioned the most important ones. What I have most frustration with are "treehuggers" who block views and are uncooperative with neighbors. I have accommodated my neighbors in every instance when they have wanted something cut and at my own expense. I am also aware of the need to leave the stumps in the ground whenever I have had a tree cut, because the danger of runoff. I think your policy should also encourage "windowing a tree" whenever it becomes unfeasible to cut the tree down or there is resistance from a tree hugger. I don't know what your policy is in these cases. Keep in mind we joined the city of Kirkland, but we do not wish to be hidebound by too many Dr. No. answers. As an aside, I find that you are doing a good job on cleaning the street gutters on 84th Ave NE, which I had to notify the County to do before we were annexed. But I am disappointed in that "tree lawn" areas (between the sidewalk and street) are not maintained by the homeowner, particularly if their house faces north/south and they never look over their fence; they should be encouraged to see the other side facing the street.
197	Try to get the next ISA (International Society of Arborists) conference in this region at St. Edwards State Park. The Climbing Championships are exciting to watch. It was at Marymoor a few years back. Also, PlantAmnesty arborists do a volunteer project for Arbor Day. They also dedicate heritage trees in Seattle. Perhaps we can bring some of these awareness raising events to Kirkland.
198	Un-permitted tree clearing needs more aggressive enforcement and more punitive fines.
199	Urban trees keep the city from becoming one slab of asphalt.
200	Views are also a big part of Kirkland. We need to respect views.
201	We are very disappointed in lack of support from the City as it pertains to a neighbor's planted "hedge" that reaches up to 2x the house and blocks our view but more than that is ugly! We realize natural trees will block our view but they are beautiful and nice to look at...thanks for listening!
202	We can't afford wasting public money on "weeds & seeds" in this current budget shortfall. GET YOUR FINANCIAL "STUFF" TOGETHER! QUIT PENDING MONEY YOU DON'T HAVE!!
203	We don't think the current restrictions accurately reflect the varying needs of treed neighborhoods. It would be preferable to cut 6 trees every 3 years, rather than 2 trees for 3 years in a row, for example. We have over 100 trees on our property; some are diseased, some are fragile for wind hazards, some are in the last sunny spot on the property-! Give us back some flexibility. The result is the same for you, but it's less expensive and better planning for homeowners.
204	We have an abundance of trees in our city and in our state. Kirkland citizens desire their local government to provide basic services, police protection, and infrastructure maintenance. The only people in Kirkland concerned with trees is the employees of the Kirkland planning department; most of the planners do not live in the Kirkland and should not be dictating private property tree policy to the citizens who actually live here. Every Kirkland resident I have spoken with believes the City's tree policy invades basic property rights. The City should maintain plant and fret over trees in its parks and right of ways and leave private tree ownership private.
205	We have taken the initiative to plant trees in the planting strip in front of our home, but it would be great for neighbors to be able to coordinate this activity with neighbors. A few years ago Seattle had a neighborhood street tree program.
206	We have to take responsibility for tree maintenance, that's a given. Therefore we should not overplant trees. Trees are very important, but we must be practical too. Fortunately trees can grow 3-4 feet a year in our area. Let's keep this in mind. We have many financial obligations as a City. So trees must take second or even 10 place to some of our most pressing needs. Thank you for asking. Vikki
207	We have tree ordinances? Really? Some bad landscaper put trees in my yard before I moved in, less than 10 years ago. They are dangerous, and I can't cut them down? Seriously? Frankly, I'm not even sure what the ordinance is, because if I asked, you'd

	know who I was, and make sure I didn't cut the tree down. We kept most of the trees, but I need to cut a few down. Making that an offense is ludicrous.
208	We live in a dark cloudy area. I live in Kirkland for the meager sunshine and outstanding views. Stop using my taxes to encourage more tall trees that block sunshine and views. Encourage considerate neighbors.
209	We live in the evergreen state and have many more important issues to discuss/fund rather than spending time talking about trees and other such naturally occurring features of our city. I live on a 7200 sq. ft. lot and the city codes required that I plant 6 trees on my lot which is excessive and intrusive. I personally would have planted 3-4 trees for an aesthetic appeal but believe that each private property owner should be allowed to decide what they want to plant on their property. This of course excludes public parking strips; the city has every right and my support to ensure a uniformed look to public spaces. I suggest a rollback of the urban forestry rules that govern private property owners.
210	We love our trees but can't afford to repair the damage they inflict. Maybe volunteer programs or funding to help homeowners manage their existing trees? Also I don't think homeowners should be able to get rid of their trees without having to replace them.
211	We n have plenty of forested areas in Kirkland to filter air. Attention should be given to areas that need trees to retain soil. I want to make decisions about trees on my property!!!
212	We need more NATIVE plants in our parks and elsewhere!
213	We need our trees!!! That's one reason I moved to the Pacific Northwest.
214	We need to keep educating Kirkland residents about the harmful impact that invasive plants like ivy and blackberries have on our urban forest and promote action to remove them.
215	We seem bent on seeing trees as timber, lumber, rather than habitat for wildlife, beauty and the natural character of this area which is why I live here. Sound proofing, protection for wildlife. Beauty in trees for its own sake and for our health and well-being.
216	We've been dealing with King County until annexation so I'm not too familiar w/Kirkland's tree maintenance program & regulations. We have a large number of significant trees on our property and surrounding us and I love it. I truly dislike current building practices where they come in a totally remove all trees from a piece of property to build a house.
217	When I see a tree trimming crew on my street I wish that I could ask them to respond to a problem with a public tree without them having to go and get a request. I have asked and no response except that they couldn't do the trim without another notice. A waste of time for them and my neighbours.
218	While I love trees, I also have heard quite a few complaints from folks who love to raise their own vegetables, but find they cannot due to too much shade from their neighbor's trees. I also know someone who is suffering property damage (cracked walkways and dying plants) due to a neighbor who has decided to allow a cottonwood tree to grow in her small back yard - the roots are causing severe problems for the next door neighbor. There need to be ordinances to help those folks whose property is being negatively impacted by trees.
219	Why are developers allowed to clear all trees, and then plant two inch trees?
220	Why not incorporate a celebration for trees with one or more of the festivals in town?
221	Wise use of money by the city is more important than a few trees....the city needs to "hug" more money and less trees
222	Would have preferred that messy, fruit-baring trees had not been allowed in our condo complex. Development.
223	Would love to see an easy to understand brochure explaining Kirkland rules and regs about tree pruning and removal. This could get mailed to each household, and to each new owner who comes to the city. Also need more info on enforcement--what is a violation, what are the consequences, if we witness a violation who to call--weekday and w'end, etc.
224	Would love trails in the Juanita Woodlands Park (maybe that is County?) so folks can enjoy the forest. And awesome that the City is looking at ways to strategize the future of its urban forest goals. Thanks Kirkland!
225	Yes - don't destroy Big Finn Hill park by building a fire station on park land.
226	You cheated - keep the 40% goal for pre-annex areas. Play up the Tree City USA connection. Work with schools to educate kids and their parents about trees. Get developers to plant bigger street trees rather than pathetic ones some have done.

Appendix D: Organizational Charts




PUBLIC WORKS
Organizational Chart
Director
Administrative Assistant
Sr. Ops & Financial Analyst
Capital Projects Manager
Senior Project Engineer
Project Engineer (5)
Accounting Support Associate IV
Office Specialist
CIP Inspector
CIP Outreach
Development & Environmental Services Manager
Development Engineer Supervisor
Development Engineer
Senior Plans Examiner
Sr. Construction Inspector
Construction Inspector
Development Eng Analyst
Permit Technician (2)
Solid Waste Program Lead
Solid Waste Coordinator
Recycle Educ/Outreach Specialist
Surface Water Supervisor
Water Quality Specialist
Sr. Surface Water Eng
Surface Water Eng
Water Quality Program Coordinator
Surface Water Education Outreach Coordinator
Street & Grounds Manager
Street Lead
Street Maintenance (6)
Signal Shop (3)
Sign Shop (2)
Public Grounds Lead
Ground Technicians (3)
Arborist
Graffiti
Shipping & Receiving (2)
Transportation Eng Manager
Transportation Engineer
Parking Coordinator (2)
On-call Eng Program Assistant
Surface Water and Waste Water Manager
Surface Water & Wastewater Lead
Surface Water Maintenance (11)
Waste Water Lead
Waste Water Maintenance (4)
Water Manager
Water Lead
Water Maintenance (9)
Internal services Manager
Utility Data Entry Clerk
PW Office Specialist
Management Analyst
Maintenance and Inventory Control Technician
Lead Facilities Services Technician
Technician II (1)
Technician III (2)
Faclities Services
Fleet Supervisor
Mechanic I
Emergency Vehicle Tech (3)
Office Technician


PARKS & COMMUNITY SERVICES
Organizational Chart
Director
Administrative Assistant
Recreation Manager
Recreation Systems Administrator
Recreation Coordinator (4)
Program Assistant (2)
Deputy Director
Development Engineer Supervisor
Sr. Construction Inspector
Development Eng Analyst
Permit Technicians (2)
Solid Waste Program Lead
Environmental Ed & Outreach Specialist
Administrative Assistant
Parks Operations Manager
Accounts Associate
Parks Coordinator
Parks Supervisor
Office Technician
Support Lead
Sr. Groundsperson (2)
Groundsperson
Ballfield Lead
Sr. Groundsperson (2)
Groundsperson (4)
Horiculture Lead
Sr. Groundsperson (2)
Groundsperson (3)
Natural Areas Lead
Sr. Groundsperson
Groundsperson (2)
Field Arborist